More precise rejection

ASDR-III: Improved functions, new features, integrated double parison reject system

New addition
Dirk Münnekehoff arrived in April to support Stephan Pies and his Sales team

Industry 4.0
futronic’s IoT alliance with strategic partners helps concentrate know-how and synergies

Finely dosed
Controls for Zeppelin’s Liquid Dosing System enable precise workmanship in tyre plants

automation in a new dimension
Dear readers,

The 25th glasstec exhibition is just around the corner and as usual futronic will be there. You are cordially invited to join us in Hall 13, Stand E73. As a special premiere this year, we will be sharing a booth with our partner Forma Glas. We look forward to meeting you there and to striking up some interesting conversations!

The 2018 exhibition will be the first glasstec without Wolfgang Lachmann, our long-serving Managing Director who has now retired from active professional life after some 30 years at futronic. The new issue of our Journal contains a profile in his honour.

The focus in Dusseldorf will once again be on our controls and drives. Our completely revamped ADR-III reject system as well as our new Swab Cycle Monitoring System SCMS will be on board for the first time. Discover what role futronic controls play in tyre manufacturing and learn more about the Industry 4.0 alliance which we have forged with selected partners.

We also report on the reorganisation of Sales, our extended premises, our new trainees and other events of interest at futronic.

On this note, I wish you plenty of exciting reading with the new Journal.

Sincerely,

Michael Preuß

By the way, you can also find news and reports from our company on our Facebook page. Please feel free to check it out.

Shoulder to shoulder

futronic forges Industry 4.0 alliance

As an automation specialist, futronic has devoted considerable attention to Industry 4.0 for some time now. At a conference last April the control system specialist took the next step. The idea is that, shoulder to shoulder with strategic partners like GLAESS Software & Automation GmbH of nearby Weingarten and Jetter AG of Ludwigsburg, futronic will be able to concentrate know-how and synergies and implement specific customer projects. The aim is to secure a pole position for the company with respect to the digital transformation and develop sustainable automation solutions. “We’re good at capturing and collecting sensor data on the machine level and at sharing it via a suitable infrastructure”, explains Stephan Pies, Head of Sales. “What we can’t do by now, however, is structure and analyse the ever larger data volumes and evaluate them based on relevant criteria.” Other specialists are called for there.

Harnessing data

Specialists like GLAESS. The company develops software solutions for industrial automation. In future, founder and Managing Director Frank Glaess intends to focus even more on preparing, analysing and harnessing the data which is supplied by the machines. And under the leadership of Joachim Kittelberger, VP Research and Development, his colleagues at Jetter, futronic’s parent organisation, will assist the alliance with their know-how and experience in areas such as controls and drives, machine networks and smart factories or data management and visualisation.

Open to other partners

The Industry 4.0 alliance between futronic, Jetter and GLAESS is also open to other partners like system houses with specific IT expertise or providers of cloud services. “Stephan Pies: “One of our objectives is to build up a competence network that will enable us to lead customers through the digital transformation quickly and comprehensively and make their production systems fit for global competition”.

Imprint:
Publisher: futronic GmbH, Michael Preuß (V.i.S.d.P.), Tolnauer Straße 3-4, D-88069 Tettnang, Phone +49 7542 5307-0, www.futronic.de
Editor: René Kius, kiuskommunikation; Gestaltung: Brandgold Kommunikation, www.brandgold.de
Image credits: Lisa Berger, futronic, René Kius
**New man**

**Dirk Münnekehoff strengthens the Sales team**

futronic is growing steadily. It therefore comes as no surprise that the Sales department was recently expanded. Dirk Münnekehoff arrived in April to support Stephan Pies and his team.

**Sales reorganised**

Wolfgang Lachmann, futronic’s long-serving Managing Director, went into well-earned retirement in February (see page 7). Since then, Michael Preuss has been sole Managing Director of futronic GmbH. To enable him to concentrate more on his duties leading the company in future, Preuss handed over responsibility for sales to Stephan Pies at the turn of the year. Pies’ main task involves looking after key accounts. The responsibilities assigned to his colleagues in Container Glass have simultaneously been broadened. Marc Meerschaut, for example, whose territory was previously restricted mainly to Western Europe, South America and the Middle East, now also supports customers in India and the U.S. And Murat Yolaçan, our contact for clients in Turkey and the CIS countries, has been charged with sales in Asia too. In the Industrial Automation division things have remained pretty much the same: Hamdi Regaya and – since April – Dirk Münnekehoff are responsible for winning new customers and attending to existing ones.

**Swab cycles monitored automatically**

Most of the time, the operator of the IS machines in a glassworks has the swab cycles absolutely under control – thanks to professional training and many years of experience. Occasionally, though, mistakes are made nevertheless and the specified swab cycles are not adhered to. In cooperation with technicians from Verallia, futronic has now come up with an affordable system which supports machine operators with this routine task and helps avoid errors. Our Swab Cycle Monitoring System (SCMS) monitors the swab cycles automatically and provides visual and acoustic warnings indicating when, and on which section, the next cycle is due. The SCMS consists of an LED timer display connected to the FMT24S. A specially developed add-on for the FMT24S firmware controls the counter, resets it at the end of the swab interval and starts the next cycle. The different job-dependent swab times are stored and managed centrally in the MCT database. The SCMS ships with a robust industrial LED display and the necessary FMT24S software upgrade. futronic will unveil the SCMS to a trade audience at the upcoming glasstec exhibition.

Aged 48, he is not only highly qualified with more than 15 years of experience as a sales engineer; he can additionally draw on a network of well-maintained contacts with potential partners, suppliers and customers in a wide range of industries. He also has plenty of ideas and suggestions to help drive the company’s sales strategy.

Born in Remscheid, a few miles east of Dusseldorf, Münnekehoff’s main duties will include supporting existing customers; he will moreover be responsible for winning new clients and exciting automation projects in the German-speaking world. The emphasis is on the handling & assembly industries. In addition he also supports his colleagues around Stephan Pies in projects in the branches bulk materials, beverages and tableware. “With his vast experience and technical know-how, Dirk Münnekehoff is ideally suited for a job in Sales at futronic”, says Pies, our firm’s Head of Sales.
More precise rejection at the “hot end”

User expectations regarding container glass quality are extremely high. However, quality also has to be controlled: faulty containers on the conveyor belt must be reliably identified and accurately removed. The ASDR (Autonomous Stuck and Down Ware Reject System), futronic’s low-cost system specifically for this purpose, made its debut in the mid-nineties. It has been continuously developed by the firm’s engineers over the years; the control system specialist from Lake Constance will now take advantage of the upcoming glasstec to present the third, completely revamped generation.
First and foremost, the ASDR-III reject system does what any reject system is supposed to do: it auto-detects faulty containers by means of a light barrier and removes them with compressed air. Faulty containers can be any containers which are broken, have fallen over, are too close together or have stuck together as well as any cullet or fragments. Containers which are smaller or larger than a specified, freely selectable diameter or which exceed any other tolerance limits are likewise rejected.

**Improved functions, new features**

The ASDR-III, developed by futronic in response to the increased quality requirements laid down by container glass manufacturers in the last few years, comes with several significantly improved functions compared to the predecessor version plus a whole set of new features. The ASDR-III ships with a control unit in the new design as standard as well as an enlarged, 8-digit LED display. A light barrier unit is also included. In contrast to the previous generation, it consists of not one but two vertically mountable, retro-reflective sensors, providing far better detection and rejection accuracy. The new control unit can moreover capture and store more operating data than before, in other words it supplies more – and more precise – information for statistical evaluations of the production process.

**Reliable damage avoidance**

More light barrier units can be linked up to the ASDR-III if necessary using the interfaces provided. A retro-reflective sensor, for example, which is mounted downstream of the ware transfer and counts the quantity of good products as they pass by, is available as an option. There are also plans for a third, likewise optional light barrier unit, positioned directly upstream of the hot-end coating tunnel. The aim is to detect congestion as soon as it occurs and then interrupt the supply by activating continuous reject mode. The ASDR-III sends a parallel signal to the control unit of the hot-end coating tunnel, which automatically stops the spraying process and lifts the cover concerned, so that the operator can remove whatever it is that is causing the obstruction. Apart from anything else, serious damage to the production line can be reliably avoided in this way.

**Integrated double parison reject system**

The ASDR-III additionally differs from its predecessor in that it features an integrated double parison reject system. Double parisons are containers from more than one parison. One or two infrared sensors can be optionally connected to the ADSR-III for this purpose. These IR sensors measure the temperature of the passing containers. If a container’s thermal signature deviates from the setpoints, it is rejected as soon as it forms at the hot end. A single sensor installed just above the conveyor is normally sufficient. If a second sensor is used to enable misshapen products to also be identified and rejected quickly and accurately when manufacturing large, wide-necked containers, for instance, it should be positioned next to the conveyor and level with the necks.

**Seamless integration in the production environment**

Many plants and machines still work with controls which cannot handle the rejection process at the hot end. The ASDR-III reject system was therefore designed as a standalone solution which fits seamlessly into existing IS production environments as well as into any control architecture. Section-dependent reject signals from IS controls can also be processed by the ASDR-III without any problems. The ASDR-III control unit is accommodated in a robust housing which easily withstands the harsh conditions prevailing in the IS machine’s environment; all components are rated for temperatures of up to 85°C. Owing to its compact design, it can be flexibly integrated into the production line and installed directly at the conveyor.
Zeppelin Systems of Friedrichshafen builds complex systems for bulk materials of all kinds. The controls for the individual components are supplied by futronic in its role as development partner. The modernisation of existing mixer lines and the construction of new ones on behalf of the world’s leading tyre manufacturers is another example of successful cooperative ventures.

The project basically revolves around Zeppelin’s new, innovative Liquid Dosing System (LDS). It comprises several IBC container stations with a capacity of 3000 litres which hold the different oils used in the manufacture of tyres. Heat exchangers in the station housings initially heat only part of these liquids, in other words they adjust the viscosity ready for further processing.

“The stations on the various lines feed the dosing cylinders, “which you could say are the heart of the LDS”, explains Stefan Hertel, project manager at Zeppelin for Plastic Processing & Rubber Plants. Each of the dosing cylinders has a volume of between 30 and 90 litres and can be supplied by valves with up to four different liquids. The oils are injected into the mixers, and eventually into the production process, with the aid of hydraulic systems.

“Parts of the technology our Liquid Dosing System replaces are several decades old”, Hertel adds. In the past, the amounts needed for the production process were weighed gravimetrically. Hertel: “It was done using open oil scales”. The LDS, by contrast, is a completely closed system which meters the liquids into the dosing cylinders volumetrically. The result: easy handling with no contamination, vapours or impurities. Above all, however, “the liquids are metered more precisely than with the traditional method”, Hertel asserts. It is now also possible to handle liquids with higher viscosities. What’s more, a recycling station can be integrated into every line.

The system has to be perfectly coordinated, of course, and all components must communicate with one another. There is one main control cabinet per line, which futronic’s specialists have filled exclusively with Siemens components. The software for the LDS was developed by Zeppelin. The control system is the nerve centre, where all information from the sensors converges, the recipe parameters from the subsystems are processed and the actuators are controlled.

“Together with futronic, we’re helping our customers stay at the forefront of technological developments.”

Each container station also has its own control cabinet and panel, likewise built by futronic, as a standalone solution. The software for these is Tettnang-designed; it allows the various liquids and control parameters – for instance, for the heating, pumps and valves – to be individually configured at each of the container controls.
stations. The installation of the wiring for all mechanical and hydraulic components will take place at futronic in Tettnang, as will the final acceptance of the standalone units with the control cabinet and the electrics – a strategy that has proven itself on several prior occasions.

Both Zeppelin and futronic have some previous experience of tyre production projects. This is clearly noticeable in the cooperation and the end customers also reap the benefits. “Together with futronic, we’re helping them stay at the forefront in the future”, Hertel concludes.

Wolfgang Lachmann is what you might call an institution in the glass industry. An engineer through and through, his passion for automation solutions in container glass manufacturing has inspired him for around 40 years. As Technical Manager and later Managing Director Development & Technology, he has driven the development of many new technologies. In 2004, for example, the FMT24S became the world’s first ever control system for glass machines to feature IP technology – a real milestone. It was also under his aegis that futronic branched out into the development of automation solutions and products for customers in other industries such as bulk materials, handling & assembly and beverages. His efforts were crowned with considerable success – futronic expanded in leaps and bounds, sales boomed and the payroll grew steadily longer.

Stricken by the glass virus
Prior to joining futronic, Wolfgang Lachmann took a degree in Electrical Engineering. Lachmann finally received an invitation from Oberland (now Verallia), the Bad Wurzach glass manufacturer. He was “stricken by the glass virus”, as he puts it, while taking a look around the factory and being treated to some spectacular insights into the production process.

He was put in charge of technical computer applications and production automation solutions in the company’s R&D department – and soon became a preferred contact for suppliers and external service providers like futronic. The latter was acquired by Oberland in 1986 and two years later the young communication engineer transferred to the control system specialist as Technical Manager. When futronic’s former Managing Director retired in 2004, Wolfgang Lachmann took over together with Michael Preuss.

Future role as a consultant
Preuss paid tribute to his long-serving co-Managing Director as a reliable partner on equal terms, who has “steered the company through ups and downs with considerable skill and rock-solid engineering expertise”. Wolfgang Lachmann hasn’t disappeared from the scene completely, however. Before leaving, he vowed “There’ll always be a place in my heart for futronic and I’ll be around to support the firm as a consultant on future projects where necessary”.

Cutting edge in the face of global competition
Lachmann’s successor started work at futronic last December. Frank Ebersbach is responsible for all of futronic’s software and hardware development activities in the Container Glass division as well as for projects to automate customised applications with embedded systems. The idea, of course, is that more new and innovative products will be created under his wing. “futronic is one of the leading suppliers in this field”, Ebersbach explains. “I want to help secure our company’s cutting edge in the long term in the face of global competition.”
Abdel spent his childhood in the south of Morocco. He was a very talented pupil at school and, like his elder sister, he wanted to train in a medical profession. He left home for Rabat, the Moroccan capital, to study dentistry and subsequently found a job at a hospital. Then, one day, the computed tomography scanner broke down. The manufacturer sent an experienced engineer from Wiesbaden to repair it – an encounter that changed Abdel’s life.

The two men became friends and Abdel developed a fascination for technology. He felt inspired – and he realised that this was what he had really wanted to do all along. At his friend’s suggestion, he emigrated to Germany in 2011 – after knuckling down successfully to an intensive language course. Abdel enrolled as an undergraduate at Hamburg University of Applied Sciences; he wrote his dissertation on microprocessor technology and medical devices at the Fraunhofer Institute in Nuremberg’s Department of Medical Engineering. He then studied for his Master’s degree in Electrical Engineering at Nuremberg Tech, specialising in automation and robotics. It was through a recruitment agency that he later came to futronic – and stayed. Abdel became a permanent member of the team in May, working as a developer for embedded systems, microprocessor technology and hardware design.

Employees in the Spotlight

A fascination for technology

Abdel Ilah Adil, aged 36, joined the futronic team permanently in May as a hardware developer for container glass manufacturing applications.

The two men became friends and Abdel developed a fascination for technology. He felt inspired – and he realised that this was what he had really wanted to do all along. At his friend’s suggestion, he emigrated to Germany in 2011 – after knuckling down successfully to an intensive language course. Abdel enrolled as an undergraduate at Hamburg University of Applied Sciences; he wrote his dissertation on microprocessor technology and medical devices at the Fraunhofer Institute in Nuremberg’s Department of Medical Engineering. He then studied for his Master’s degree in Electrical Engineering at Nuremberg Tech, specialising in automation and robotics. It was through a recruitment agency that he later came to futronic – and stayed. Abdel became a permanent member of the team in May, working as a developer for embedded systems, microprocessor technology and hardware design.

The new trainees have arrived

Once again, three young people launched their professional career at futronic in September. Tobias Regitz, aged 18, is a native of Friedrichshafen who has just started training with us as an Electronics Technician for Industrial Engineering. He has already completed a vocational course in electrical engineering at Tettnang Electronics College (EST). It was during a placement with a major automotive supplier in the Tettnang region that Tobias realised that he definitely prefers electronics to mechanics. Aziz Moradi (19) also tried out various things including being an electrician for building electrical systems before finally choosing electronics. One of the skills he will learn together with Tobias will be how to build a control cabinet. Aziz was born and bred in Iran. He came to Germany four years ago, starting out at a general secondary school before moving onto a one-year vocational course in Ravensburg. Inessa Friedel, aged 21, obtained her higher secondary school leaving certificate from a social science college, yet she admits to actually being more interested in business. That is why she is now looking forward to training with us as an Industrial Business Management Assistant with a higher-level qualification in “International Management with Foreign Languages”. We wish our new trainees an exciting and instructive time at futronic!