

Interview with SIGMATEK Chief Executive Alexander Melkus

# Modern and Future-Proof

*The 30-year anniversary of the company, the expansion of engineering capacity or the new releases at the coming SPS IPC Drives: At SIGMATEK, there are lots of exciting things happening. SPS-MAGAZIN sat down with CEO Alexander Melkus to discuss this topic, as well as market trends and the company's strategy.*

**SPS** This year, SIGMATEK will turn 30. Mr. Melkus, you represent the 2nd generation of executive management in the company. Which trends have shaped SIGMATEK since you joined the company?

**Alexander Melkus:** Looking back, entering into Safety technology was certainly a milestone for the company. That was roughly ten years ago, with the creation of the machine guideline. Soon after its introduction, we presented the first Safety modules for the C-Dias system at our exhibition premiere at the SPS IPC Drives. Since then, safety technology has become a

re development team and know-how from the company S-Drive with SIGMATEK. The MDD 100, our first modular server drive system, came onto the market – and already with integrated Safety in the form of the Safety functions STO and SS1.

**SPS** And how is the drive technology presented in your portfolio today?

**Melkus:** Today, we can also provide complete solutions in drive technology. In addition to our high-performance single and multi-axis servo systems of the DIAS Drive series, we also provide customer-specific products – partially based on the standard drives and partially as completely new designs. We therewith set ourselves apart from other drive manufacturers on the market, as due to the high complexity, they avoid providing individual solutions. Whereas at SIGMATEK, customer-specific solutions make up a significant portion of our drive business. Exciting examples that we've already produced are the drive controller for the compact Agilus robot series from Kuka or the modular drive system for a customer in the plastics industry.

**SPS** What is new to report from SIGMATEK's drive technology, Mr. Melkus?

**Melkus:** We are continuously focused on properties and market demands, which the next generation of drive technology from SIGMATEK must cover. The new generation should enter the market at end of 2019.

**SPS** Today, your control and I/O system provides the user with a wide range of modules. What were the central features with which you originally positioned the S-DIAS series on the market?

passion and will remain a strong focus in the future. Because in virtually every major development - whether in our control system, in the handheld operating panels or on the drive side – Safety is a central point.

**SPS** Thereby, SIGMATEK also takes completely unusual paths. An example of this can be seen in the wireless handheld operating panel with integrated Safety, which they introduced two years ago. What is the status quo here? Is the panel now available on the market?

**Melkus:** Currently the Safety variants of the operating panel are TÜV-certified and we can now begin with serial delivery. Because we have piqued great interest beyond the existing SIGMATEK client base – not only with machine builders but also in robotics – there is now a lot to do. Since the introduction of the panel, numerous orders have come in.

**SPS** Let's take a look at the drive technology: How and when did the previously control-oriented company SIGMATEK become active on the Drive side?

**Melkus:** We first developed our own servo drive technology in 2008 and 2009. The main reason for this was: We no longer wanted to limit ourselves to the control, but provide automation as completely as possible. That is why we integrated the enti-

## Alexander Melkus, Sigmatek

» *We set ourselves apart from other drive manufacturers through customer-specific designs.*

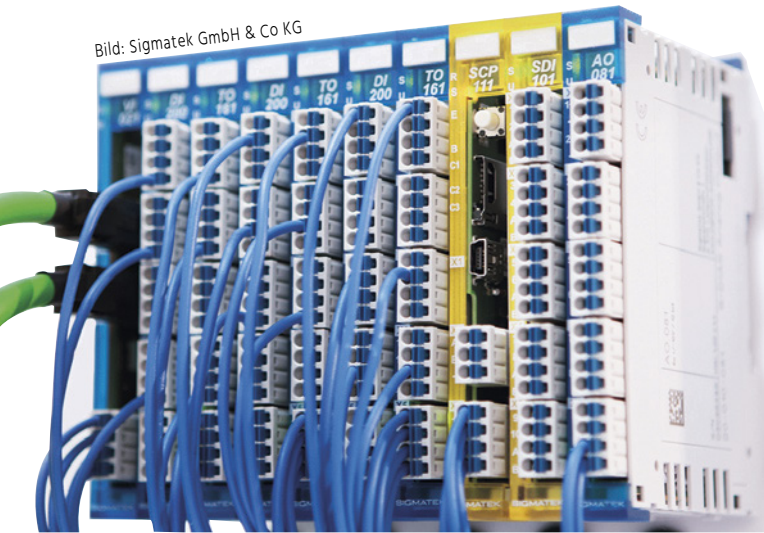


» *At some point, the performance density or miniaturization is physically exhausted – with S-DIAS, we are already very close to this limit.*



**Melkus:** The control system S-DIAS is compact, robust, smart. There is a multitude of different module types, CPUs, I/Os, motor output stages, measurement technology as well as Safety

Bild: Sigmatek GmbH & Co KG



With the control and I/O system S-DIAS with integrated Safety, SIGMATEK focuses on exceptionally high-performance density.

– and all this within a module width of 12.5 mm. The range of modules continuously grows with the requirements of our customers.

**SPS** And with that, S-DIAS has been well received on the market?

**Melkus:** Yes, the continuously growing system has been well received by our customers since its introduction in 2012. For them, it is an essential aspect: S-DIAS can be combined over the VARAN bus with its predecessor, the C-DIAS series. The user therefore does not have to change over to the new, more compact system all at once but can transition step by step and use both systems in parallel. Accordingly, C-DIAS is still in use by customers.

**SPS** Which arguments then speak in favor of S-DIAS in comparison to other systems on the market?

**Melkus:** Here, the form factor and the performance density associated therewith should be mentioned foremost. When you convert the number of available I/Os to the required space, S-DIAS is undefeated on the market to date. Today, required space is a central aspect in many automation applications. The S-DIAS CPU modules are also very compact and with their scalability, provide the exact performance required. Our customers can therefore meet current trends perfectly: In the Industry 4.0 concept and the associated decentralization, classic control cabinets must be integrated smaller or completely into the machine.

**SPS** So you are already working on a new, more compact control generation?

**Melkus:** No. At some point, the performance density or miniaturization is physically exhausted, as the cable cross sections cannot be reduced as desired. With S-DIAS, we are already very close to this limit: Once the modules are completely wired, the control itself is barely visible. It is not possible to get much

smaller and so even after six years on the market, there is no room for improvement from today's viewpoints.

**SPS** Is it not true that in the future, new functions will be implemented via the software anyway?

**Melkus:** In a control, one cannot function without the other. That is why our software and hardware are designed to work together but are not married to one another. This means: Application designs in our engineering environment LASAL, which our customers have driven forward over a long period of time and with great effort, can be exchanged one-to-one - e.g. when upgrading from C-DIAS to S-DIAS. This provides the user with high future-security that is not limited to the availability of individual hardware components.

**SPS** Does one need their own hardware in their portfolio at all to be successful on the market?

**Melkus:** Modern automation technology will also remain a combination of hard and software in the future. Several providers mainly or even exclusively concentrate on the software. In contrast, there are others who provide their hardware with tools, but it is up to the customer to establish the connection between the different systems. SIGMATEK has been acquiring the know-how for both sides since its beginning and can provide its customers with complete and integrated automation solutions. There are not many mid-sized providers like SIGMATEK with such a far-reaching complete range of products.

**SPS** This means that today, the engineering environment LASAL is a significant point to differentiate yourselves as an automation provider on the market?

**Melkus:** Yes, as the software suite from SIGMATEK is very versatile and connects all automation components with one another – CPU, I/Os, drives, Safety and visualization. The various tools in the suite come from one source and are completely integrated.

**SPS** What new things can we expect to see at the exhibition in Nuremberg from SIGMATEK software?

**Melkus:** At this year's SPS IPC Drives, we will be showcasing our new visualization tool, the VisuDesigner. Based on HTML5

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and JavaScript, it fits perfectly into our tool-landscape. The first customers, to whom we have already presented the result, have confirmed that we have successfully combined web visualization and performance. A second balancing act that we were able to master in the new tool: Even inexperienced programmers can quickly achieve a good result – while specialist of course, can go really into depth and detail. The web visualization will be officially available in the first quarter of the coming year.

**SPS** Let's talk about communication: Will the Fieldbus and Industrial Ethernet protocols with OPC UA and Ethernet TSN, which are widely used today, soon be replaced by a standardized solution?

**Melkus:** That is indeed an interesting question. Ethernet TSN provides fascinating properties for the industry, but the underlying standards are operated by completely different branches; such as the broadcasting sector or automobile manufacturers for example. At SIGMATEK, we naturally monitor the current developments and their potential for automation very closely. How much concrete benefit there is in accessing sensors and actuators in the field directly over all levels from the highest company systems, must be determined in practice. Will OPC UA and TSN really lead to a uniform super standard for manufacturing? Lastly, the applications and their requirements remain different: One is highly time-critical, the other is not. Some require a high throughput, with others manageable data volumes are sufficient. In any case, a uniform standard makes sense. The costs will have a deciding influence on the proliferation.

**SPS** More buzzwords currently on everyone's lips are industrial IoT and cloud. What services does SIGMATEK offer here?

**Melkus:** In regard to IoT and cloud computing, we focus on different solutions such as for remote access to machines and systems, as well as the necessary security mechanisms. In addition, we naturally explore new possibilities for comprehensive data collection and analysis. If one compares the possible added value in relation to the costs, a certain disillusionment often sets in. The dimensions in the overhead for beneficial IoT solutions in machine manufacturing can be quickly underestimated. Providing collected machined data is only half the battle. It also requires the corresponding experts who are so familiar with the respective process that they can recognize correlations in the collected data and draw conclusions regarding problems or potential for improvement. Many smaller companies are clearly overwhelmed by this complexity – and with the costs as well. For this reason, we advise our customer on the options for their specific application.

**SPS** Mr. Melkus, can you provide an outlook in conclusion. What is SIGMATEK's strategic future?

**Melkus:** An important strategic aspect is: We want to expand or international engagement and have therefore restructured internally, as well as hired additional personnel. A second, very significant point is the expansion of our capacity for development. Not only have we considerably increased personnel and office space at our Vienna branch, but we are also continuously expanding the SIGMATEK headquarters in Lamprechtshausen: By the end of the year, the expanded areas in building 3 will be occupied, the new building 4 provides space for the applications team, drive development, a test hall as well as ample storage capacity.

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**SPS** Thank you for the interview.