1. How important is the Industry 4.0/digital concept to hollow and container glassmaking?

Digital technology is continuing to make inroads into industrial manufacturing. As an automation specialist, futronic has devoted considerable attention to Industry 4.0 for some time. We've accumulated broad know-how and experience in this area. Our aim is to secure a pole position for ourselves with respect to the digital transformation and develop sustainable automation solutions.

2. Do you expect the digital concept to be embraced by the hollow glassmaking industry?

There's no doubt that the hollow glassmaking industry will have to embrace it and indeed, that's already happening. Yet whereas in many branches and industries this theory has already been turned into practice, at least in part, in the container glass sector the majority of machines and components in a production line are still standalone units. But insular solutions have had their day; the ability to network machines from different manufacturers is increasingly taken as a given. Rather than simply improving isolated machines or workflows, as has always been the case in the past, Industry 4.0 focuses on the value creation process as a whole and optimises it holistically. The advantages are undeniable: higher energy efficiency, productivity and operating reliability. Not to mention the positive impact on company profitability.

3. What does your company offer its customers in terms of the Industry 4.0/digital glassmaking concept?

From the outset, futronic has pursued an open source strategy with its machine controls and drives. Our systems can be flexibly tailored to machines from different manufacturers and with different specifications. This principle was strictly adhered to by futronic during the development of the FMT24S machine control, for instance. And, of course, it also formed the basis for our annealing lehr control (FLC). We've now set about networking these two systems together. The two components each have a freely configurable Ethernet interface, which allows the control to be connected to a higher-level process control system as well as to the FMT24S. Information on the machine state, productivity or job changes – factors that are vital for temperature control in the annealing lehrs and hence for quality assurance – can be recorded in the system in this way. That may be only a first step on the path to Industry 4.0, but we're determined to keep on treading it to the end and develop more networked automation solutions in the future.

4. Has digital glassmaking become an important concept at your company? Do you have an R&D team devoted to it, for example?

We don't have a special team dedicated to it specifically right now. As a mid-market company, we're not really in a position to take on an investment in the resources needed for such complex technologies and projects on our own. That's why we cooperate closely with various partners in this area. And I don't need to tell you that all our R&D staff have it at the back of their minds whenever they develop a new control system. They have to. We all have to. If we didn't, new developments wouldn't stand much chance of surviving in the market.

5. How has your technology evolved to embrace the digital age?

The technology – the hardware and software – is one thing. Big data is quite another. The data generated by the systems plays an important role in Industry 4.0. It is not the quantity of data that matters though, it is the quality. We therefore need to give more thought to what we actually do with it. We need to be clear about which data adds genuine value for customers. And about which machines in the production network profit particularly from which data and how. That's the real challenge when it comes to developing sustainable automation solutions. And, once again, we're well on the way to mastering it.

6. Are there any negatives to the digital age?

It is not so much the sheer volume of data that is the problem. It is more putting that information into order, interpreting it and deciding which is important and can be leveraged effectively that costs time and therefore money. However, those steps can be automated to a large extent.

▲ Stephan Pies, Director of Sales, futronic.

Digitalisation obviously also has far-reaching consequences in other areas, such as human resources. A whole series of tasks lie ahead of us here, to which individuals, society, politicians, higher education and companies that provide training will have to adjust and for which jobs and professions that are suitable for meeting future needs must be defined. I firmly believe that there will still be a call for human machine operators, for instance. The question, above all, is how many and with what qualifications. It is a question that concerns us all.

7. What is your vision of a container glass factory in five to 10 years time?

We've talked about a few points already: glassmaking will become more energy efficient, productive and profitable as a result of digitalization, Industry 4.0 and the technologies they give rise to. It will also be safer. Safety will be key here too. And apart from that? Plant and equipment manufacturers today are expected to respond more flexibly to whatever the customer wants and glassmaking is naturally no exception. I can't imagine, though, that we'll ever be in a position to manufacture one-offs for the same price as standard products. I reckon that's where Industry 4.0 will come up against its limits. In the end, however, it's difficult to predict what the future holds. It's crucial that we stay on the ball and don't wait too long if we're going to play an active part in shaping the future of automation.