

INDUSTRY 4.0 MAKES SENSE QUICK CHANGES IN THE TASTE OF BEVERAGES OR KETCHUPS, INSTANT CREATION OF NEW SAUCES, SHAMPOOS, DETERGENTS, CLEANERS OR PLASTICS. IT IS ALL POSSIBLE THANKS TO BATCH SYSTEMS - SAYS IN THE INTERVIEW JAROMIR TURLEJ, CEO OF CONTROL-SERVICE

Is production a challenge nowadays?

J.T.: Certainly. In the era of extremely rapidly changing reality, production plants must meet the more sophisticated needs of their customers, requiring immediate delivery of products that perfectly fit their expectations.

Is it therefore desired to be able to easily modify all manufactured products?

J.T.: Maybe not all of them, but the great majority of them, yes. Possibility of an immediate correction of paints' color according to rapidly changing trends is very tempting. Being able to quickly change a taste of beverages or ketchups, quickly create new sauces, yogurts, shampoos, detergents, or cleaners seems to be attractive too. Changing some attributes of resins or polyester polyols may open up new markets.

How to build a production line which will facilitate a quick reorganization of the product portfolio?

J.T.: Thanks to the so-called batch production systems it is possible to easily

modify recipes of new products and shorten time to market. Importantly, changes are executed by a technologists without involving programmers. Batch production systems work well wherever we deal with mixing, thermal treatment or chemical treatment of many ingredients in order to produce a finished product. It ideally suits for the chemical, pharmaceutical and the food & beverage industries. The advantage of batch production systems is that the system takes care of itself regarding resources, i.e. a availability of equipment and raw materials.

Is Control-Service able to build such a optimal batch production systems?

J.T.: Yes, we've been doing this for years, it's our core business. We create flexible systems, easy for future development, and most of all capable of instant and flexible modification of manufactured consumer goods' features. Thanks to our objects database which has been developed for years Multiuser Engineering working mode we are able to create reliable systems in a short time. Our systems are adjusted to be integrated with SAP systems and support

production line managers with production scheduling. The systems are based on Siemens PLC's and Wonderware System Platform - they are the leading suppliers in the field of a digitalization and production automation. What is even more interesting, all our systems come together with production process' simulators.

Production process simulator? What are the benefits of this solution?

J.T.: It's a complex, virtual model of a production line with a precisely mapped manufacturing process - it's a practical implementation of the Industry 4.0 idea. The digital process simulator allows verification of the entire system before it is implemented on the site. It allows to check all interlocks, dangerous scenarios, production processes, step by step, and avoiding risk of waste or losses due to bad product quality or facilities failure. The simulator shortens the commissioning time too. It is extremely important to our customers. For example, a recent project for our customer we've commissioned during only one weekend while doing the same job the traditional way would have taken at least 4-5 weeks. That's an enormous savings in production downtime.

That's impressive! Apparently it helps to control the cost of a project.

J.T.: Right, but it's just a tip of an iceberg of the simulator advantages. Before launching the new project, we are able to provide a training for operators. They are learning and getting familiar with new control system in comfortable conditions at our office. Very often they operate systems which control very dangerous processes in explosion areas.

That's why it's so important to give them an opportunity to learn the system before it's implemented on site.

Is the simulator useful on a daily basis for operations at the plant too?

J.T.: Of course. It's very useful tool for testing new solutions and existing system's modifications. Whenever you want to introduce some changes to a production line i.e. install some new devices, tanks or equipment, first you can simulate an influence of these changes for your business. Then, if the results of simulations are satisfying for you, you can then implement those modification at your plant.

Didn't the pandemic discourage your customers from implementing such advanced systems?

J.T.: Quite the contrary. In the pandemic era, where it's difficult to provide a full staffing, digitalization and automation of production processes has a beneficial impact on the production continuity. This year we are implementing a few batch production projects with simulators. Now, we are in the process of signing new contracts for such systems, which are expected to be implemented next year.