Teamwork: Halo and Pantec implement technologically leading OPC UA integration for Bandex weaving mill

Every inteos® project is unique. We were able to set ourselves a particularly interesting challenge in implementing our solution for a company in our home region. The medium-sized weaving mill Bandex is one of the leading manufacturers of curtain and curtain tapes and offers „technical tapes" for a wide variety of industries.

GOALS AND REQUIREMENTS

Bandex was already using an MES system from another provider, but it was no longer maintained and supported. Over the course of time, it had reached the limits of its potential. On the one hand literally, insofar as the maximum possible number of machines had been exhausted, on the other hand in the less tangible sense of an unsatisfactory response time per machine and outdated control of the OHP machines.

In view of the discontinued support, modernizing the existing system no longer seemed expedient. Because the MES system was heavily modified and precisely tailored to Bandex's needs, the same degree of customization and adaptability was, of course, also expected from the new solution.

After Bandex had carefully evaluated the existing situation in the course of a thorough inventory, a specification was formulated and, on this basis, a detailed invitation to tender was created with precisely specified requirements. From this tender, Halo with inteos® emerged as the winner. The aim was to completely digitalize production from warping to weaving to finishing - and thus to bring
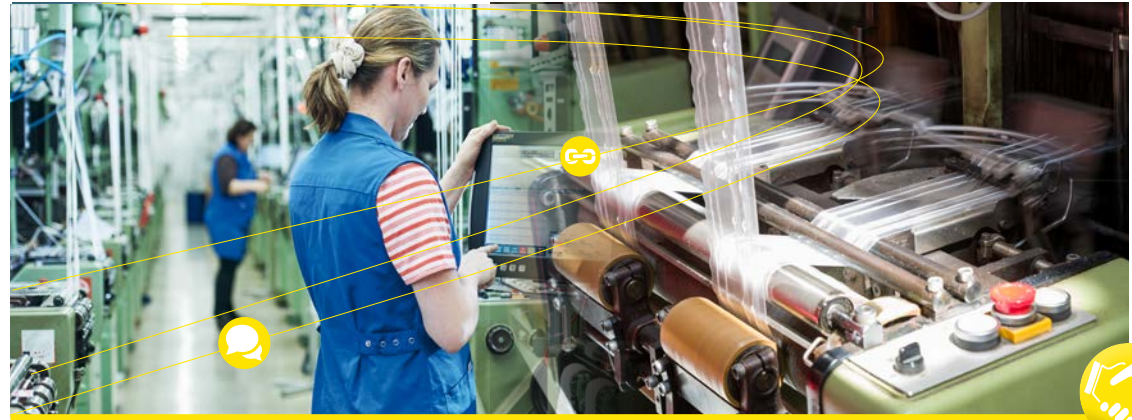
FACTBOX
› Pioneering bidirectional OPC UA communication
› Total integration of machine - control - software
› All-purpose control for different machine types
› Regional competence cluster

the transparency and consistency of the data acquisition up to the latest technical standards.

Because the machine-side control technology in the weaving and warping mill had to be modernized at the same time, we had the opportunity to work with the Liechtenstein company Pantec, which was commissioned by Bandex for the general overhaul of the machine control for porting to the OPC UA protocol.

Project implementation & challenges the central technical feature of the project is the use of the cutting edge OPC UA interface, which enables state-of-the-art bidirectional data transmission.

OPC UA is a platform-independent protocol for machine communication that is developed by the OPC Foundation. 52 ribbon weaving machines from Müller and Gomez and 2 sectional warping machines were integrated into the MES solution via OPC UA servers implemented as an „on-board solution".

„**Industry 4.0 and OPC UA interfaces** - many talk about them, Bandex does it. Together with Bandex as the client, Pantec as the control supplier and Halo as the software supplier, we implemented the project in record time and without any major difficulties. From now on, all machines in the ribbon weaving mill and in the weaving preparation area are now bidirectionally networked via OPC-UA - as far as we know, currently a globally unique and trendsetting solution for textile production." "

Marcus Ott, inteos® project manager

The machines were equipped with 10" touch displays, the usability of which was implemented in close coordination with the specifications already captured during the inventory process and the specific requirements of the machine operator. As we know from our experience in other projects, this personalization and individualization increases acceptance of the new and initially unfamiliar solution.

The touchscreen operating logic, which differs considerably from the "classic" operating solution previously in use, particularly due to its greater intuitiveness, contributes significantly to the optimization of productivity and job satisfaction. The weavers' work is significantly simplified and production is practically paperless.

In addition, we were of course confronted with a few other, less particular requirements, as are common in other projects: these include connection to the existing SAP ERP system - problem-free integration using a standardized interface - and the gradual introduction of the solution on the fly. Although the previously used MES system had reached its capacity and development limits, it was still fully functional and, after the long period of use, it was precisely adapted to the existing processes.

A smooth transition had to be ensured here without hindering ongoing production. We were able to realize this smooth transition thanks to our extensive experience with similar projects and our precise knowledge of textile production processes.

pantec bandex inteos

BENEFIT AND STATEMENT

Apart from the direct technical benefits that the new solution offers for Bandex and which we will come back to shortly, a somewhat more abstract aspect should first be mentioned here: the importance of regional technology clusters, which is consummately expressed in the cooperation among Bandex, Pantec and Halo. The extent of regional know-how that could be mobilized here in a relatively small geographical area shows how well the Rhine Valley region is prepared for the challenges of digitalization.

Existing know-how and production structures are intelligently linked, thus creating technical and interpersonal synergies.

We consider this form of regional cluster formation to be essential for creating a climate of friendliness toward innovation, in order to ensure competitiveness on the world market and to offer an interesting environment for technological investments, research initiatives and a highly qualified workforce.

Of course, what is immediately more important is the specific benefit that was created for Bandex in production. Bandex managing director Andreas Geiger formulates the benefits of the new solution jointly implemented by Pantec and Halo as follows:

The collaboration with Halo during the entire project phase was very congenial and very fruitful for both sides. In particular, the implementation of a bidirectional connection of the weaving machines and warping machines is a novelty in textile production. inteos® is a very simple and intuitive system, which increases its use and acceptance in production. Halo easily implemented Bandex's requirements and we received a tailor-made system.

Andreas Geiger, Bandex Managing Director

inteos
maßgeschneiderte Lösungen
customised solutions
soluzioni personalizzate

Case Study

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