

PRESS RELEASE

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BOGE helps shape the future of manufacturing

BOGE has placed itself at the cutting edge of compressor manufacture by investing €2 million in creating a 'smart factory' at its German headquarters in Bielefeld, west of Hanover.

The 2,000m² smart factory, which manufactures BOGE's HST (high-speed turbo) oil-free compressor, monitors, controls and optimises manufacturing to maximise product quality and reliability, and ensure there are no faults during production.

The factory also facilitates traceability so that, in the rare event that there is a problem, it can be identified and corrected quickly. Daniel Mittag, product manager HST at BOGE, explained: "In case of a failure, the smart factory helps us to diagnose and trace problems. We are able to review where the problem came from because all the data is related to components. This means it is easy to analyse and get in contact with the supplier to avoid similar problems in future."

The smart factory employs Industry 4.0 (automation and data exchange in manufacturing), using computer systems to monitor the physical processes of the factory and make decentralised decisions. Compressed air components 'communicate' with connected peripheral equipment automatically, using integrated networking to ensure the entire plant operates at full efficiency at all times.

Aljoscha Schlosser, digital innovation manager at BOGE, explained: "It is unnecessary for us to have an automated line for the HST manufacture because production numbers are not so high.

“For us, it was more important to effectively ‘connect’ components and the worker together to reach higher quality. We use barcodes so that, for example, the material ‘knows’ which product it will become part of at the end of the process.

“Man, machine and component communicate with each other, work together and even learn from each other. The smart workplace not only projects instructions and parts lists onto the worker’s workbench, but also adapts its knowledge based on experiences.”

Smart torque wrenches with wireless local area network access, for example, know which torque is required, and independently adjust themselves.

Production technology in BOGE’s smart factory is digitised so relevant values are recorded automatically. The path of the components and any relevant work step can thus be traced seamlessly.

BOGE continues to develop the smart factory and plans to transfer its principles to other products in the future.

NOTES

- Around 20 employees in the smart factory manufacture frequency converters and rotors, coat components or assemble complete compressor assemblies supported by the networked process management.
- To complement the smart factory, BOGE has also invested in 3D printing, magnetising and coating systems at its German HQ.
- BOGE’s smart factory uses ‘OPC Unified Architecture’, a set of machine-to-machine communication rules for industrial automation developed by the OPC

Foundation. OPC (Open Platform Communications) is an interoperability standard for the secure and reliable exchange of data in industrial automation. It does not rely on a particular platform and ensures the seamless flow of information among devices from multiple vendors. The OPC Foundation is responsible for the development and maintenance of this standard.

About BOGE Compressors

BOGE Compressors Ltd is the UK Daughter Company of BOGE KOMPRESSOREN Otto Boge GmbH & Co. KG based in Germany. BOGE manufactures a comprehensive range of oil lubricated and oil free screw and piston compressors used by all sectors of industry to supply compressed air for a wide range of manufacturing processes. It also supplies a complementary range of filters, dryers and condensate management equipment. The product is sold and serviced through a dedicated network of 36 distributors throughout the UK and Ireland.

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