



Rexroth Plant, Homburg: Networking of machinery and products

First Connected Industry line on-stream in daily production

From the concept study to everyday use: At the Rexroth plant in Homburg, a new pilot assembly line which is integrated into the “Bosch Production System” (BPS), enables semi-automatic production of disc valves for tractors – in six basic types and over 200 variants. RFID and Bluetooth technology enable the machinery, the workpiece and the user to communicate with each other – for flexible and efficient production of customized products.

After the presentation of the “Smart Automation Demonstrator” at the Hannover Fair 2014, Rexroth has now commissioned the first practical, continuously adaptable Connected Industry line. This uses intelligent tool carriers equipped with RFID tags to detect the required product variant and communicate the necessary materials and processes to the line. Each station reads these tags and displays the relevant information to the operator via a monitor screen to reduce throughput time and enable optimum use of resources.

Perfectly informed – with activeCockpit

Weak points are quickly identified. The activeCockpit production information system developed by Rexroth continuously collects, filters and visualizes production data. Operators and decision-makers in the Production department therefore have a communication platform with which they can quickly initiate the necessary solution processes. This reduces down times and allows greater productivity.

Automatically adapted workplaces

The individual workplaces automatically adapt to the needs of their operators. This is done using Bluetooth tags with a user profile, which are carried by each employee and which are read out by the assembly station. In this way, the illumination of the station or the font size and language on the monitor are adapted accordingly. Even the depth of information on the monitor screen automatically adjusts to the qualification of the particular user. With this, Bosch Rexroth demonstrates the practical implementation of Connected Industry and received the “Industrie 4.0 Award” by the trade magazine “Produktion” for the best networking of humans, machines and processes.

Tough application

Production of individual products in a semi-automatic process which enables short throughput time and ultimate quality down to a batch size of 1.

Ingenious solution

Automatic adaptation of workstations to each production task and each user thanks to RFID and Bluetooth technology.

Exactly

With the pilot assembly line in its own plant, Bosch Rexroth demonstrates the practical use of Connected Industry concepts and gains valuable experience for further development.



Solved with

- ▶ activeCockpit for continuous gathering and processing of production data
- ▶ RFID and Bluetooth tags for automatic networking of operators, machinery and products