

Brief reports

Stephan Lauber - Training master for electrical professions



Since 1 December 2019, Stephan Lauber has been a master trainer for electrical professions in the training workshop at the Buderus Guss site in Breidenbach. In 2018, he had completed his master craftsman's examination and - before moving to the training workshop - was responsible for electrical engineering maintenance. It is important for Stephan Lauber to provide young people with up-to-date training content and to demonstrate potential and career opportunities in the foundry at an early stage.



IT in production at Buderus Guss

In production at Buderus Guss, the digitalisation and networking of individual production steps has reached a high level. This allows processes and thus the entire production process to be designed more effectively.

For example, in the core production at the Breidenbach site there is already a cross-plant and cross-departmental network. Almost the entire plant has been equipped with the possibility to install cameras for troubleshooting in error-prone areas. This enables faster error analysis and troubleshooting. In addition to extensive production data acquisition (PDA), the company began three years ago to introduce an in-house backup system for production. Pioneering progress has been made in the areas of maintenance, cooperation with other companies, quality assurance and data security.

(Abb.: Adobe Stock)

New machining line for lightweight brake discs



The new processing line for lightweight composite brake discs will go into operation in early May 2020. The mega-project will deepen the introduction of lightweight construction concepts at the Lollar site of Buderus Guss cooperation partner Robert Bosch Lollar Guss GmbH and open up pioneering perspectives. Lightweight brake discs are gaining ground in the product portfolio of Buderus Guss GmbH and its cooperation partner. More and more manufacturers of premium vehicles are opting for weight-reduced brake discs because they contribute to overall weight savings and thus play a part in reducing CO₂ emissions, among other things. The investment in a new machining line ensures the implementation of the special overall

production concept for lightweight brake discs. The reason: Two materials - grey cast iron (friction ring) and aluminium (cup) - must be used to produce the discs - can be edited. From the end of the second half of 2020, following a ramp-up phase, around 360,000 lightweight brake discs per year will be produced for premium vehicles. In total, the new line is designed for around 400,000 lightweight brake discs per year. It is fully automatic (nothing is moved manually), meets all ergonomic requirements and has a high degree of complexity thanks to four robot cells and seven rotary cells.

Buderus Guss relies on ODiN

ODiN - Leave nothing to chance. Sudden machine downtime, unplanned cost-intensive maintenance work, predefined maintenance cycles? With the smart Industry 4.0 solution ODiN (Predictive Analytics) from Rexroth, this is a thing of the past.



Thomas Heck, Head of Maintenance at Buderus Guss:

„We have been in contact with Bosch Rexroth since 2010 in order to avoid unscheduled production stoppages through scheduled maintenance. No unscheduled breakdowns could be prevented by regular maintenance work. Together with Bosch Rexroth, we therefore equipped one of our molding lines with an additional sensor system in

2014 and finally introduced ODiN in 2016 based on the good results. All measurement data are now collected in real time and transferred to the cloud, where they are evaluated using self-learning algorithms and big data analysis. Using the data-based model, ODiN creates a separate health index for each monitored system. Bosch Rexroth's experts use this index, along with detailed analyses, to assess the expected service life of the system, warn in case of irregularities, and make maintenance recommendations.

Thanks to ODiN, we can now assess the current condition of the system, identify changes in the condition of critical components at an early stage, and initiate necessary maintenance and repair measures. In view of these successes, we will consistently continue on this path and use ODiN on additional molding plants.“