

ABSOLUTE ENCODER

Sensors control movements of stacker trucks

The first automated guided vehicle was built in the 80's. This could not have been conceived without sensor technology. Today more and more AGVs are being introduced and the technology has developed since then.

THE SENSORS IN THE AUTOMATED GUIDED VEHICLE (AGV) technology are programmed according to the external conditions and transferred during data inputs to the master controller of the AGV. The same applies to the encoders of Wachendorff (Germany). The company's WDGA absolute encoder comes with CANopen.

"The first AGV are still in use today. They may have been modified and modernized, however it is common for an AGV to be used for at least ten years", reports Sami Välimäki, Purchasing Manager for the company Rocla, Finland branch. In 2007 Rocla was the first company in the world to bring AGV to the market in series production. The manufacturing process has been reduced due to the construction and delivery times have also decreased from six months to eight weeks. The AGV can be reprogrammed to adapt to changed transport service requirements.

The rotary and lifting movements, as well as the travel speed are controlled by sensors, in particular by absolute multiturn encoders. Rocla Purchasers and Developers became aware of the German company Wachendorff as they were looking to procure new sensor technology in 2010.



Automated guided vehicle from Rocla (Photo: Wachendorff)



Sami Välimäki, technology purchaser at Rocla and Janne Karjalainen, product manager at the Finnish Wachendorff distributor examine one of the most robust AGF (Photo: Wachendorff)

"Reliable quality, optimal supply channels, long-term availability and, in particular, the very innovative Endra multiturn technology, without battery and transmission and therefore wear-free, environmentally friendly and energy self-sufficient convinced us that the incremental and absolute encoder and Wachendorff services are an optimal fit for our requirements. The Endra technology also allows for an extremely small, space saving encoder construction. This got us excited as the installation space in our AGV is very limited. Together with Wachendorff we were quickly able to develop solutions and everything is going well: within six months we have already bought and installed hundreds of encoders. We are extremely pleased", says Sami Välimäki, Technology Purchaser at Rocla.

For Sami Välimäki joint development is an important part of the cooperation between customer and supplier. Rocla is a company that focuses on development and implements in-depth test runs before the products are sold on the market.

"We always transport the customer's original products to our test center for testing: this can be anything from several tons of steel and paper rolls or medication packaging or glass. Every stacker truck is thoroughly tested under as close to real conditions as possible, the test run lasts for an hour and the safety conditions must be fulfilled. Ultimately, afterwards there is no one to make sure that everything is in order if the truck is used during the night shift. It must drive and stop safely with consideration for personnel and the surroundings, there is no place for material damage", emphasizes Sami Välimäki, Technology Purchaser at Rocla.



The CANopen WDGA absolute encoder from Wachendorff (Photo: Wachendorff)