

Automatization of internal logistic using automatic guided vehicles

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Automation of internal logistics using automated guided vehicles, AGV, is important to increase efficiency and reduce production costs, and therefore represents a significant factor in automating production sites and warehouses. AGV is a transport vehicle with a possibility of automatic control. Complexity of the solution is built on a software controlling the AGVs and connecting them to their environment. The TPV concept is based on the company's own modular and open source central control system. Development of software solutions is the result of cooperation with the development partner, IKU. The TPV approach of logistics process automation is built on two principles. The first principle is the technological knowledge of logistics processes and the second the knowledge related to the automation of such processes. They both ensure that the customers' needs are understood in the course of the professional interaction with the customer leading to effective and reliable solutions. They have realized that trolley conversion to a bigger height (usually necessary with competitors' AGVs) constitutes a substantial obstacle in implementing automation of internal logistics using AGVs. Consequently, they developed their own automated guided vehicle called Optimatik 160 which is unique on the market. Its essential advantage lies in its low height. Optimatik 160 is even lower than the standard industrial trolley wheels resulting in no need to convert the trolleys in use. Another advantage is their small width of 420 mm enabling transport of standard EURO pallets without any need of trolley conversion.