PRODUCTIVITY-BOOSTING APPLICATIONS IN THE SHEET METAL PROCESSING INDUSTRY

Application for the manufacturing industry - Cross-subsystem monitoring for the sheet metal processing industry

SUMMARY

A cross-industry, manufacturer-independent application solution for monitoring machines and networked installations has been implemented. Thanks to its modular structure, the solution is available to end users across multiple subsystems, with easy integration and retrofitting capability in the field.

CURRENT SITUATION

SMEs expect digitalization and networking solutions to provide tangible value added in the form of applications designed to boost efficiency and productivity. Such applications will in future be used in many areas of manufacturing that were previously hardly digitalized at all or always worked with proprietary, closed application solutions.

PROJECT DESCRIPTION

The project team developed a platform and an application roadmap for a digitalization strategy targeted at SMEs. The collaboration between the partners enabled a joint strategy to be formulated and individual application modules as well as various association-wide functions to be planned. The fact that key functions were developed on a cross-enterprise basis benefits both the enterprises involved and the end users.

REFERENCES

www.juconn.com
www.industry-business-network.org

PARTNERS

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SOLUTION

The application solution on the association-wide platform enables the modular implementation of individual functions for monitoring, some control functions, and general interoperability (e.g. control of ventilation systems by processing machines). The high-security gateway enables the simple integration (and retrofitting) of systems, independently of the manufacturer. The visualization and business intelligence have been adapted to the use case in the modules. The companies benefit from uniform standards at the application level that enable them to monitor operating states, optimize service and avoid future operating failures. There are plans to extend the solution to include "pay-per-use" business models. End users in the sheet metal processing industry have at their disposal an interoperable application that integrates systems from different manufactures on a single platform.

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INDUSTRY 4.0 FEATURES

Modular interoperability as the basis for a manufacturer-independent solution. Networking and visualization of the processes. Observation of the administration shell concept at machine and factory level.

STANDARDIZATION APPROACHES

Modular approach. Integrated concept with possibilities for standardized programming and networking within an industry domain. The administration shells are mapped here as a network with semantic descriptions.