ICZ PROMIS

MONITORED PRODUCTION

A PRODUCTION DATA COLLECTION AND PROCESSING SYSTEM THAT ACQUIRES CURRENT AND RELIABLE INFORMATION ABOUT THE STATUS AND PROGRESS OF PRODUCTION PROCESSES, AND ESTABLISHES CONDITIONS FOR THEIR MONITORING, IMMEDIATE EVALUATION AND CONTINUOUS IMPROVEMENT.

ICZ PROMIS is an ICZ a.s. software product designed for collecting and subsequent processing of data from production and logistics processes. Its architecture, independence from database environments and the use of standard tools for data interface creation make it possible to promptly acquire, evaluate and redistribute all the necessary information about the current production status and progress.

[MODULAR SOLUTION]

The ICZ PROMIS system is designed to be a modular and scalable solution with functions that can be adapted to the production process, its level of automation, and specific monitoring and evaluation requirements. Standard interfaces make it possible to establish bidirectional data connections with both PLC systems and cooperating business applications. The open structure of the system and the use of object methods for its design and implementation make it possible to combine basic and superstructure system functions to achieve the required characteristics resulting from a detailed analysis of the application environment performed within the project preparation stage (implementation design). The acquired data can be processed within the system or transferred for further processing in applicable business applications.

[DATA COLLECTION]

Input Transaction

An input transaction is a basic system object represented by a specific event that is significant for the progress of the production process, for material flows or workplace status modifications. Appropriate data are entered from desktop or mobile terminals, or collected automatically from the connected data inputs (operating cycle counters, barcode or RFID readers) or from PLC systems. Data correctness is verified during transaction processing; the data are subsequently stored in an operational database to be available for appropriate evaluation and transfer into another business application for further processing.

Transaction Types

Basic types of input transactions include, for example, start/interruption/end of a production or transportation batch operation, consumption/origination of a material volume at the workplace input/output, quality control performance, workplace status change (preparation, production, downtime, and fault).

Additional transactions can focus, for example, on achieving the required level of product traceability, tool and device movement registration, and personnel activity monitoring. The transaction set can be expanded as required by the customer, and the existing transactions can be modified (data contents, scope of checks).

FEATURES AND BENEFITS

- Acquisition of current and trustworthy data about the status and progress of production and material flows, and about production resource utilization efficiency (OEE)
- Virtual elimination of errors during data acquisition by means of automatic identification (bar code, RFID), and continuous checks of entered data correctness.
- Reduction in the volume of paper documents
- Full control over the material inputs flow, work-in-progress and final products.
- Collection of data for back- and forward-tracing of production at the requested level of detail
- Support for modern logistical concepts of production material management (Kanban, supermarket, milkrun)
- Standard data interfaces (EDI, XML) for integration with cooperating business applications (flexible production management, maintenance management, logistics management, quality management, etc.)

[ICZ PROMIS]

[DATA PROCESSING]

The acquired data can be processed within the ICZ PROMIS system or transferred to other business applications.

Series of user-modifiable queries are used for internal data processing, and their corresponding outputs can be either printed or exported into the Microsoft Office environment.

Standard data interfaces, which can be adapted according to the requirements of different cooperating systems, are used to deliver data for external processing. The data can be used in a wide range of business applications, especially in the field of flexible production planning and management, material flow registration and management, quality control, management control, human resources management, personnel movement registration, etc. The use of this data always depends on the specific customer's conditions, the options provided by the cooperating applications, and the existing business processes.

[BAR CODE AND RFID]

Automatic identification technology rationalizes data collection and secures their quality and independence from human factors. Bar codes can be affixed to the currently used documents (production and material dispatch notes, Kanban cards), material transportation unit labels, and semi-finished or finished products. RFID tags can replace labels in many situations.

Direct Part Marking (DPM) technology can monitor production at the level of individual pieces if required. Production of all the necessary labels and the requested methods of product marking are provided through standard system features. The required technical equipment (scanners, printers, marking devices) are usually also included in deliveries.

[TRACEABILITY]

Production traceability should correspond to the types and contents of the individual transactions. The acquired data can be used for forward- and back-tracing of material inputs, production-in-progress and final products at a detail level (batch, pallet, package and piece) that corresponds to the character of the production, quality control requirements and applicable laws. It is also possible to monitor and control the passage of individual products through the production process (workflow), and acquire information required by the quality management system (technological operation parameters and results of checks). If a suitable method for permanently marking the final product is used (microdots, laser), the acquired data can be used during the whole product lifecycle.

[EXTENSIVE INTEGRATION OPTIONS]

Data exchange with cooperating business applications is provided both by EDI/XML-based universal interfaces and individual interfaces reflecting the specific requirements of business systems.

Interconnection with workplace management systems, implemented through an OPC server, enables automated data collection wherever possible and meaningful.

[OPERATIONAL SUPPORT]

Data collection systems usually become inseparable parts of production processes when deployed. ICZ a.s. operational support assures the necessary level of operational availability and quick response in the event of any failure.

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