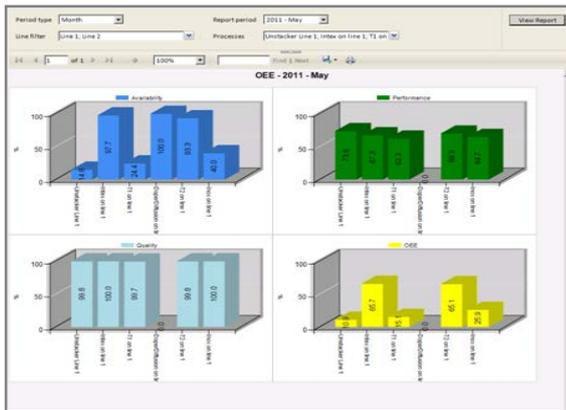


Apis Shop Floor Traveller



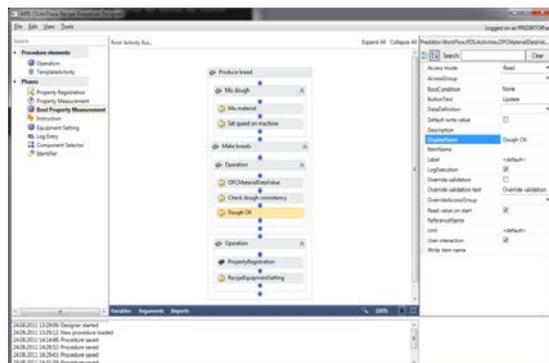
Shop Floor Traveller

Gain Ultimate Control and Tracking while removing all Paper from the Production Area



View and analyse result
Product and process
history reporting

Producing a batch
Control recipe execution



Defining product rules
Master recipe setup



- Easily Create and Edit your own Manufacturing Procedures
- Easily Access Process History
- On-Line Manufacturing Instructions, Updated Instantly
- Quality Assurance of Production Steps and Product Documentation
- Cycle Time Registration and Bottle Neck Identification

The APIS Shop Floor Traveller is an easy to use software tool from Prediktor, that removes unnecessary paper from your manufacturing area. Operator screens replace instructions and paper-based SOPs, and manufacturing and product data is registered in input screens instead of paper sheets.

The core of the system is the recipe system, defining how to produce your product. The recipe system is based on the ANSI/ISA-S88 standard. The master recipe defines the template for a product, while the batches are defined by the control recipes, which are created from the master recipe template.

Recipe procedures are defined using the Shop Floor Traveller recipe procedure designer. A procedure defines the work flow needed to produce the product, and consists of operations and activities put together in a sequence. The operations defines the sequence of each main production step, and a set of activities defines what should be done for each step.

When producing a batch, the operator executes a control recipe procedure. The user screen then leads him through each operation with instructions and rules. Manual data is entered and approved by operator for each step. The work flow engine executing the recipe procedure, controls the sequence and make sure the operations are performed and registered in the correct order, extending your quality assurance directly to your shop floor.

The product batch history with manually and automatically collected information is stored in a database for product documentation and reporting.

Cycle times for each operation are automatically stored and can be used for bottle-neck analyses and line optimization.

THE OPERATOR INTERFACE

The operator interface is web based and can be presented in almost all standard web browsers. An access control system ensures easy yet strict control of who is allowed to execute the recipes. The access can be specified individually to each operation and activity in the procedure, making it possible to have control of manufacturing personnel for each production step.

When logged in, the operator sees a work area where instructions are presented and data entered. Data can be entered with keyboard, bar code scanner or selected from lists. When approving an operation, the operation history is stored and the workflow for the next operation presented. The product data can then be reviewed and approved.

AUTOMATIC DATA COLLECTION AND EQUIPMENT CONTROL

Automatic data collection can be configured as a part of procedures, sampling processes and quality measurements from machines and tools. Similarly, operator input and procedure information can be transferred to machines and tools at specific steps in the procedure. The system supports a wide set of communication standards, including OPC.

THE RECIPE PROCEDURE DESIGNER

The recipe procedure designer is the software used by the engineers and production management to define the work flow for each product. The user interface is easy to use, where users can “drag and drop” from a library of predefined activity types. The operations are defined in a hierarchy of parallel and sequential steps, and each operation can have sub-operations.

When starting the designer, the user is identified with his Windows user-id and the designer is connected to the configured production database if the user has access. The user can then start defining new procedures or edit existing. The procedures are stored in the database with complete audit trail and version control.

Activities in a procedure:

- Work instructions and SOP's
- Manual data collection
- Start and stop of operations
- Check points
- Product log
- Material identification
- Automatic data collection
- Machine setpoints

THE DATABASE

The data is stored in the APIS MES database in a MS SQL Server. The database is modelled based on the ISA S95 standard for easy access and integration with other system.

REPORTING AND DASHBOARDS

Web reports and dashboards are created from the data in the MES database using standard reporting tools. MS Reporting Services are used for standard, as well as customized reports. The report builder editor is easy to use, and the customer can create and edit reports based on templates and predefined data sets.

Ad-hoc querying and data analysis is also possible through this solution.

EXTENSION AND SCALABILITY

The APIS Shop Floor Traveller easily integrates with the rest of the tools in the complete APIS MES software package. Tracking, ERP system integration, order management, SPC and OEE are examples of functionalities that can be added using the same database and web portal as the foundation.

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