

Plant Acquis iT – Production data management

Plant Acquis iT acquires, processes and files process, operational, machine and energy data for the plant-wide information management. In particular it takes into consideration the heterogeneous and complex nature of subordinated automation systems from which data are acquired. OPC is used as preferential interface. For systems not supporting OPC an additional, a driver-based interface is available. It is designed in such a way that it avoids interfering with the functionality of subordinated systems. Using connection methods like this, easy and flexible interfacing with various controller platforms is possible (e.g. Mitsubishi, Siemens, Rockwell, VIPA or others).

Data acquisition

Plant Acquis iT acquires and processes various types like:

- Messages (binary values),
- Measured values (analog values),
- Counter impulses/counting results and
- Character strings

both online and offline, i.e. by means of manual input.

In accordance with the Plant iT class concept, corresponding objects are created and parameterized for the recording of these values. The standard system includes additional types of objects that provide particular functions. They can be used either for data recording or processing:

- Manual input objects allow the feed of parameterized data points by means of manual input (e.g. laboratory values).
- Formula objects enable the direct mathematical and logical processing of recorded measurements (e.g. the simultaneous calculation of derived values and the acquisition of the actually measured value).
- Event objects can trigger complex activities in the system (e.g. batch switch-over or automatic reporting).
- Maintenance objects offer the possibility of setting up counters for operating hours and switching cycles. They create the basis for using a maintenance management system.

Up-to-date standards

Plant Acquis iT is customized to the specific requirements of the Weihenstephan Standards 2005 for beverage packaging plants.

In addition to using OPC and driver-based interfacing with subordinated controllers, Plant Acquis iT provides an extra communication channel for this standard.

Material Management

Plant Acquis iT fulfils the latest requirements for product tracking by providing functions for material-related production data management. In combination with Plant iT material booking records for material movements can be generated by using special kinds of event objects. As a result, functions like inventory management or tracking & tracing are also available for processes, not directly controlled by Plant iT components.

Data analysis

Plant Acquis iT provides the fundamental functions for the immediate analysis of production data:

- Curve representation of analogue and binary data in terms of freely parameterizable and storable views
- Efficient error handling by means of freely parameterizable message groups and profiles
- Weak-point analysis with the help of message hit lists, e.g. analysis of error messages according to frequency or length of appearance.

Data may be selected either by time periods, orders or batches. The results can be further refined by easily selecting from entire plant areas, individual units or single objects. For more complex analysis the system offers a data export add-in to Microsoft Excel.

Visualization

Plant Acquis iT also includes a visualization feature. The focus is on providing plant or unit-related status overviews in combination with single, operator-controlled transmission of set points. In respect to the functional principle and the applied engineering tools, the visualization feature is fully compatible with the visualization Plant Direct iT offers. The use of identical infrastructure allows visualization functions of Plant Acquis iT and Plant Direct iT to be combined in a homogeneous operator interface.

Open for extensions

Due to its open architecture Plant Acquis iT provides optimal possibilities application-specific enhancements like

- Excel-based reporting or
- Filling and packaging management

Via system-internal standard interfaces Microsoft Excel accesses the central database and enables the flexible creation of reports. The advantages:

- Consequent utilization of analysis and presentation functions of Microsoft Excel allows design of tailor made reports based on the acquired production data.
- Users familiar with Microsoft Excel can make modifications themselves

As an alternative the system also provides open interfaces for integration into HTML or XML-based reporting. But Plant Acquis iT also provides a good basis for filling and packaging management and can provide functionality like

- line-related order lists including data exchange with sub-ordinated control systems,
- plant monitoring,
- error analysis and

- performance analysis (e.g following OEE).

These functions strongly support the operating company in optimizing the plant performance.

Acquis iT messenger – the whistle blower

This Add On for Plant Acquis iT is a remote messaging system for informing responsible staff of critical alarms. The following communication channels are available:

- Short message services (SMS),
- eMail (SMTP),
- Windows warning service (NetSend) and or
- Voice message.

Voice messages may be defined as to be acknowledged. In this case the system supports multi-level, automatic forwarding in case of missing reaction of the recipients (Eskalationsmodell).

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