Providing a better view

Asset management systems need to be able to handle more data and present information in better formats if plant managers are to move towards proactive maintenance, says John van der Geer, industrial automation marketing manager at Yokogawa Europe.

TODAY'S PROCESS PLANTS REQUIRE SOFTWARE SYSTEMS THAT CAN INTEGRATE and manage maintenance information from field instruments, monitor online conditions and record historical data. Only by combining such functions with advanced diagnostics capabilities is it possible to move from corrective to predictive and proactive maintenance.

Plant management software systems should enable users to remotely access devices that feature field communication capability – such as FOUNDATION™ Fieldbus and HART-enabled instruments – and to perform centralised management of those devices' parameters.

Such functions provide efficient management and maintenance of field devices and allow the computerisation of maintenance data to streamline operations and save costs. Information such as the names of flow meters, valves and other field instruments, parameter settings, inspection records and instruction manuals should be stored in a database that the operator can easily access.

> Accumulated data can be used to enhance the development of diagnostic algorithms.

Enhanced asset management

The first asset management package incorporating and taking advantage of the field device tool/device type manager (FDT/DTM) and enhanced device descriptor language (EDDL) technologies is Yokogawa's plant resource manager (PRM™) R3.

PRM R3 incorporates many new features, including major enhancements and changes to the database system. The earlier systems (R2) used an Oracle database; however, the new system features SQL server database software bundled as a PRM component. The SQL database is installed as a part of the PRM package automatically and upgrading to PRM R3 is straightforward as the automatic conversion of the database is part of the installation process.

DTM Works is supported as a frame for device setting and tuning, which executes DTM for tuning and diagnosis provided by a device vendor. This allows the vendor to specify the look and feel of the device on the PRM system. Support is also provided for partial stroke test (PST), providing the means to perform critical functions such as PST on HART devices.

Additional benefits

The system also offers the facility for data interchange with Yokogawa's FieldMate device management wizard, providing quick and easy device configuration. In particular, the history of operations, such as parameter changes, made in FieldMate can be imported directly into the PRM system.

Advanced diagnostics include a data historian function in which some parameters needed for diagnosis are acquired automatically from field devices. As a result, accumulated data can be used to enhance the development of diagnostic algorithms. A general-purpose diagnostic tool (window) is also available to display data and threshold values (upper/lower limits) collected using the PRM advanced diagnostics application as a trend graph.

The new PRM system is fully scalable, providing a cost-effective solution to the monitoring and maintenance of anywhere between 25 and 20,000 devices in Fieldbus installations. System expansion can be implemented in steps of 1,000 units, allowing users to increase their device capability to their own schedule.

These new enhancements are over and above the existing standard PRM features of maintenance alarm/process alert functions, custom user views, device security, device viewing with built-in trending and a graphical user interface supporting both EDDL and FDT/DTM implementations.

PRM is one of the key elements in Yokogawa's VigilantPlant™ concept, promising asset excellence and creating an environment where plant personnel can 'see clearly, know in advance and act with agility'.

FURTHER INFORMATION

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