

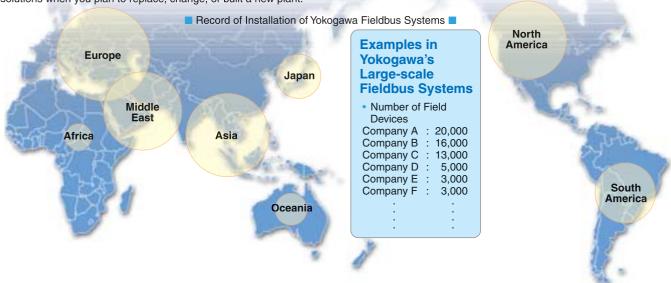
#### Yokogawa's Fieldbus Solutions greatly help to reduce plant life-cycle costs. management and maintenance planning Facility in plant (equipment, **Ethernet** Insight Sufte: Al STARD M KPI application with package "Plant Resource Manager (PRM)" Vnet/IP **FCS** Predictive diagnostics information Maintenance information management (Device Master, Inspection memo, Parts list, etc.) Audit trail 2/3000 R3 (Parameters, Inspection memo history, Opera uning and diagnostics (Monitoring and tuning of field devices, etc.) ters, Inspection memo history, Operation history) **FOUNDATION Field**Ma fieldbus H1 Versatile Device Management Wizar Introduction of PRM advanced diagnostics Vortex Fieldbus Advanced Valve pH Transmitter Conductivity Dissolved **Innovations in Maintenance** (PH202) (digitalYEWFLO series) Predictive diagnostics (ADMAG AXE (SC202/ISC202) (VTA series) (YVP) (DPharp EJX Provides an easy confirmation window with the status information of field devices in a Operation central control room. Offers valve maintenance tool. ValveNavi provides easy valve tuning and diagnostic functions. Realizes predictive maintenance based on diagnostic functions: • Impulse line blocking diagnoses Electromagnetic flowmeter electrode Planning, design and engineering adhesion diagnoses Introduction of ■ A high-quality and high-reliability fieldbus system through Heat trace temperature map diagnoses fieldbus systen Predicts valve maintenance timing add-on of Fieldbus technologies in the industry-proven · Monitors normally controlled zones in a CENTUM system. control loop using valve readback value. CENTUM control systems have a system availability of 99.99999% (seven 9s), which means a failure rate of once per 4,500 years. Notification of diagnostic res sent to system automatically Classifies devices, control loops, and alarms according to their priority and urgency and A field control station with the capability to handle massive amounts of device automatically notifies the proper persons. device data in the field digital era ■ ALF111, fieldbus communication module that supports dual-Supports maintenance work, including the redundant configuration. follow-up observation of devices and control Provides segment design tools to support the work. loops, maintenance scheduling, and requests ■ Multi-variable field devices. Detection of abnormalities insid device through self-diagnostics for urgent maintenance. ■ Facilitates design and engineering by maintaining data Examples: An EJX series pressure/differential pressure transmitter measures differential pressure and static pressure. A digitalYEWFLO series consistency with engineering tools. Simplifies device recognition and vortex flowmeter measures flow and temperature. replacement. ■ Provides an off-line engineering environment in which Upgrades devices by software downloading. design can be carried out without target field devices. Device revision upgrading can be achieved without involving any on-site work, enabling devices to be loaded with the latest diagnostic functions. Offers training programs. Supports FF883 Specification, Class1. NOTE: What is Fieldbus? Communication Method **Quality of Information Wiring and Installation Costs** Scope of real-time monitoring **Function Distribution** Maintenance Interoperability Maintenance on the site/corrective and Analog data transmitter method Since one-to-one wiring is required, as many wire as the number of field devices are necessary. Single data value Conventional instrumentation Control is covered by a DCS. 4-20 mA, 1-5V DC in one-way communication preventive maintenance Multiple field device can be Multiple data value Some of the control logics can be allocated to field devices. ■ Remote maintenance from central control Vendor-independent Fieldbus instrumentation Addition of data status at devices ■ Introduction of predictive maintenance ■ Alarm notification from devices PID AO Improvements in product quality by highly accurate data processing and less zero & span drift in trend monitoring. Increased efficiency in operation and maintenance work by the utilization of information from field devices Availability of field devices status monitoring and implementation of self-diagnosis ■ Reduction in the number of wiring cables Optimum allocation of control logics Reduced trip to the site and fieldwork System configuration with multi-vendor Advantages of Automation and standardization of ■ Reduction in the cost of installation, including maintenance work utilizing tools Freedom of selection for optimum fieldbus installation ■ Prevention of unscheduled plant Availability of remote maintenance For example, an information for the actual valve is utilized in operation and maintenance. Improved availability of the plant through Increase of field information Reduction in the size of control room

Easy addition of devices

■ Reduced maintenance costs

# Record of Installation

As a total Fieldbus solution vendor, Yokogawa has excellent experience records. Yokogawa encourages you to consider introducing our fieldbus solutions when you plan to replace, change, or built a new plant.











VigilantPlant is Yokogawa's automation concept for safe, reliable, and profitable plant operations. VigilantPlant aims to enable an ongoing state of Operational Excellence where plant personnel are watchful and attentive, well-informed, and ready to take actions that optimize plant and business performance.

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