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VP Link™

Creating a virtual practice plant through dynamic simulation

Wood's VP Link software simulates a process control system, catering for simple to sophisticated modelling needs in a continuous framework. Our software acts as a virtual practice plant to support effective operations by testing process responses on control networks and delivering interactive operator training.

When connected to an offline distributed control system (DCS), safety instrumented system (SIS), or programmable logic controller (PLC), the system logic will react as though it in a live process. VP Link writes values for process variables and offers a graphical user interface (GUI) for the engineer or instructor to present scenarios such as equipment fault, process upset, or transmitter failure.

Incorporated with our operator training system (OTS), VP Link is a test bed system to build skills. Our software also supports the periodic validation of process logic and change management. In addition, VP Link connects to our Virtuoso® systems for integrated dynamic simulation models, such as production wells, flowlines, pipelines, subsea and topsides processing facilities and controls.

Benefits of using VP Link

- Ability to test processes without modifying the control system programme
- Platform-independent to provide compatibility with most industry systems
- Modelling environment is flexible, easy to learn and easy to maintain

- Adaptable, reconfigurable and cost effective solution
- Fast track scheduling with the ability to develop models during system configuration
- Use early in the logic development phase as an offline debugging environment
- Simplicity of software makes interactions clear and fine tuning of dynamic parameters straight forward

Key features

- Can be used at any time during the entire control configuration life cycle
- Non-invasive connection to control systems
- Supports control networks, training, virtual process and high fidelity models
- Capable of reading the outputs from the control system as well as calculating the virtual process state using its hybrid process modelling
- Ability to retrieve real-time performance logs
- Extensive modelling library to enable simulation for complex process units
- Allows for several user interfaces

Application: Control system logic validation

VP Link validates control systems logic, enabling the following:

- Graphics verification
- Logic checkout at input/output (I/O), block, module or system level
- Interlock schedule approval
- Integrated testing: Mapping to DCS and interaction between DCS/PLC logic forgateway point tests

VP Link facilitates this through several features:

- Automates repetitive testing tasks such as resets
- Facilitates factory acceptance testing with customised graphics
- Offers a collaborative testing framework through distributed architecture
- Provides what-if scenarios and logging capability for systematic testing

Application: Operator training systems

Wood's OTS mimics process systems, including those with significant potential risks which require highly trained operators to ensure plant safety and maximise productivity.

Our OTS packages can incorporate detailed integrated models inclusive of production wells, gathering flowlines, export pipelines and processing facilities.

In addition, the OTS can also be used as a tool to evaluate operating procedures, tune control loops, validate DCS configuration/logic, and carry out other engineering tasks offline without interfering with actual operations.