

Process controller

For rolling mills and processing lines

The modular and scalable AC 800PEC controller is very capable and offers high level functionality to respond to the high demands of the Metals industry.



High-performance and communicative

The high-performance AC 800PEC process controller is well suited to a wide range of applications, from basic logic to advanced technological controls in rolling mills. It can handle hundreds of I/O points, installed locally or remotely.

The communicative controller supports IEEE 802.3 (Ethernet), PROFIBUS, FOUNDATION fieldbus, HART, several RS232C protocols as well as fast optical communication between the controller, to ABB drives and ibaPDA.

Control and configuration software

The control software and the configuration tool cover all ranges of rolling mill control functionality from sequential control to drives and technological controls like roll gap- or automatic gauge control. All functionality can be designed, tested and debugged in offline mode.

The new or modified application is downloaded into the assigned controller and a bumpless changeover is performed automatically by the system.

The application software is structured in an object-oriented way using the ABB Aspect Objects™ technology.

Modular and scalable process controller

- DIN-rail mounted, self cooling
- Low power consumption
- Wide-range connectivity
- Vast I/O expandability, hot-swap I/O

Control and configuration software

- Integration into System 800xA Operations
- Programming languages according to IEC 61131-3 standard, inclusive C-code layer
- Libraries from binary and sequential to technological controls
- Configuration, simulation and tests with debugging without target controller
- On-line program changes, signal trigger, status monitoring, etc.

Integration into System 800xA Operations

The configuration tool is fully integrated into System 800xA Operations as an aspect system. This allows seamless navigation from the operation environment to the configuration environment. With a mouse click you can switch from the process flow representation of a plant section to its control program.

Process controller for rolling mills and processing lines

For the high demands in rolling mills and processing lines, ABB has developed a wide range of solutions covering the special needs for these application.

The library includes solutions such as:

- Auxiliaries, e.g. handling of valves, MCC, positioning, etc.
- Pilot control, e.g. reference generation, automatic slow down, etc.
- Drive control, e.g. coiler, mill drive, bridle, looper, etc.
- Technology controls, e.g. automatic gauge control, roll gap control, coil eccentricity compensation, etc.
- Material tracking, e.g. weak point tracking, strip tracking and section set point handling

Integrated simulation functionality

All solutions are equipped with simulation functionality to enable testing of the solution without connected controller. This allows also a Hardware-In-The-Loop test to simulate the complete rolling process in front of the commissioning to secure a fast start up of the real process.

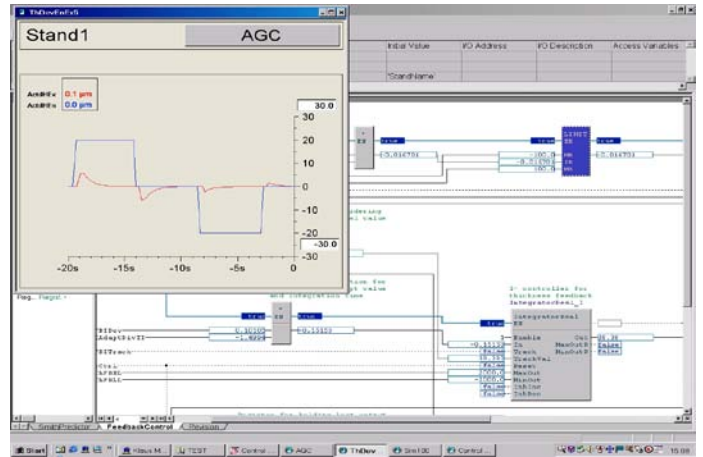
Library

The documentation of the library and the according functionality are included in the online-help of the configuration tool.

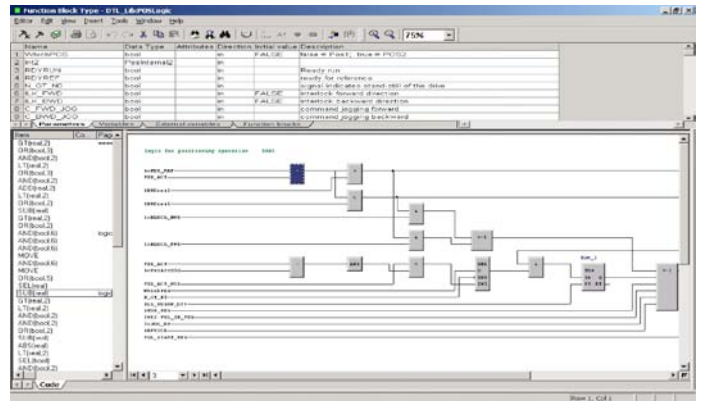
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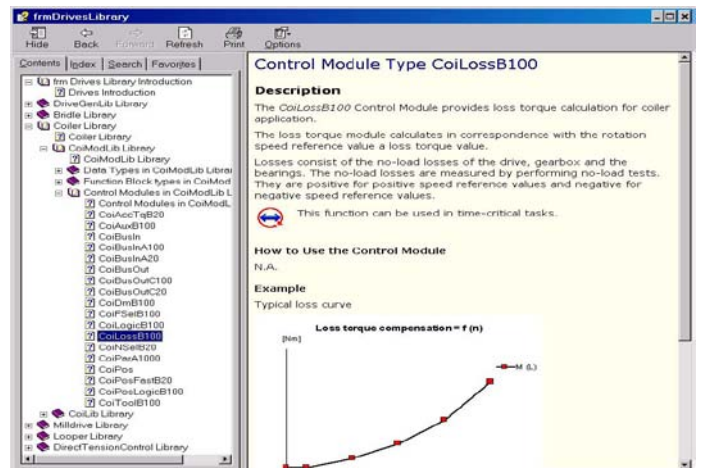
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Configuration tool: Example automatic gauge control



Configuration tool: Example function block Positioning



Configuration tool: Example library documentation