Project example

How certain are you that your PLC program will work before commissioning?

You won't know the answer until you've simulated it.

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The project at a glance

Industry
Plant engineering for the timber industry – HOLTEC log yard

Task
Testing and validating the PLC for a section of the new log yard

Key steps
Material flow including bypass ejection and refeed is fully PLC-controlled.

Goal
Securing the PLC program before actual commissioning on the construction site

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PLC = Programmable Logic Controller

3 things that keep planning teams up at night

01 Errors only become apparent on the construction site

Without prior testing, PLC errors often only become apparent during actual commissioning, when every delay becomes costly.

02 Tight construction schedule

The construction schedule is set, but rework on the control logic is delaying the entire ramp-up.

03 Complex control logic

Material flow with bypass ejection and re-injection can hardly be fully tested without a real test.

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This is how the model was built

Software Plant Simulation

Material flow completely controlled by the actual PLC.

Logging selected PLC errors in the model

Test area: Ejection into bypass and re-injection

Method Virtual commissioning before construction begins

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What the simulation showed

Error detection: Several PLC errors were detected and corrected in advance.

Parameterization: performed entirely virtually

Validation: Examined sub-area of the PLC completely validated

Logging: Selected PLC errors are logged in a traceable manner.

Time savings: Actual commissioning three days faster

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What every emulation project needs before the real plant starts up

Virtual commissioning without a real PLC connection is testing based on suspicion.

Has the control logic been fully tested, or only the part that is easy to test?

How many errors only become apparent when the system interacts with other systems, not in isolated testing?

How much time could be saved on the construction site if errors were corrected beforehand?

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Simulation · Virtual commissioning · Digital twin

Are you planning a virtual commissioning?

Talk to us before your system is running on the construction site.

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