

Automated and digital testing and qualification

Digitalization is also advancing in the process industry. onoff supports customers in the process engineering environment with the aim of unlocking the full potential of Industry 4.0. A customized software solution is developed with customers to enable the automated testing of planned production sequences in batch mode for specific formulas. Qualification and documentation following the test phase are completely automated.

The implemented software is linked with the digital twin constructed in parallel. This makes it possible to perform automated commissioning tests of the processes, starting with the I/O check and the operating mode "manual operation" on the digital simulation model.

Project Goals

- Time-consuming process tests will be automated and, if necessary, made more efficient by using an acceleration factor.
- The results are documented automatically and are unforgeable in every stage
- Engineering processes are accelerated without additional personnel resources

Technical Realization

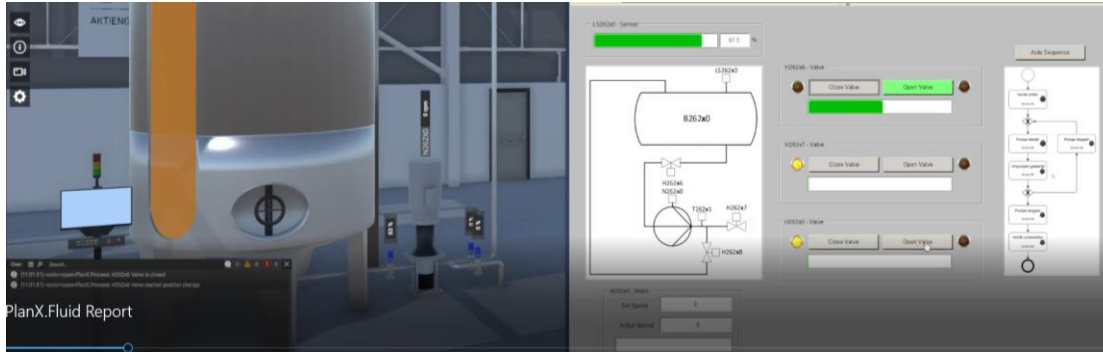
- Development of a solution based on the interpretation of the planning documentation, which was provided from the planning phase (requirement or functional specification)
- Starting batch procedures and tracking steps on the digital simulation model. Real visualization is used if it is necessary to operate the systems; this is possible both virtually and in real terms on the operating computer.
- Start of test sequences in real time and in automatic mode. Each step is precisely logged and documented directly in the documentation of the process description as a test protocol.
- Reduced test times for slow processes. The behavior of both systems was kept synchronous, so that no software changes or distortions occur



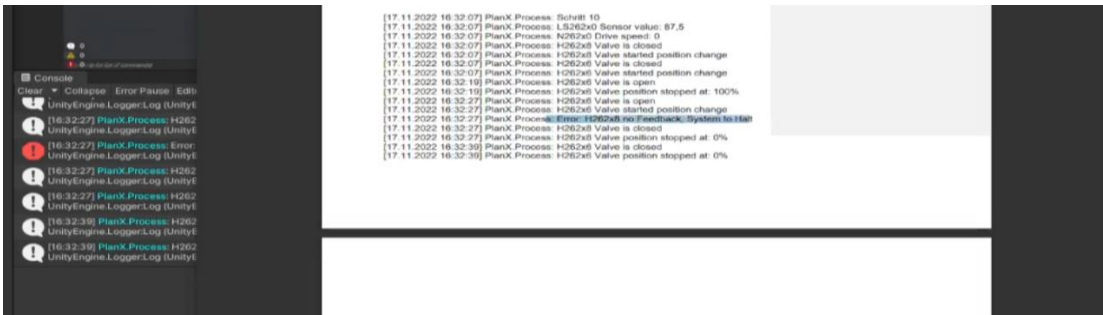
Features

- Digital in process
- Planning processes digitally
- Software qualification
- Automated testing
- Automated documenting

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Positive test run OK



Alarm in test run Not OK

Summary

The software solution developed by onoff and a parallel engineering process of automation and digital twin enables customers to shorten project lead times, increase software quality and secure their planned production start dates. Software developments and changes are qualified with test management. Every step and every transition in the process is automatically tested and documented. After testing, the documentation with the target process is automatically expanded with the actual status. Commissioning procedures can also be automated. Another benefit for the customer: In the future, a test run can be performed and documented for every project change.

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