



ProDyn

Riser operations planning and management software

Dynamic simulation is an essential tool for all new and existing process plants to ensure operators are properly trained, plant safety management procedures are effective and plant operations are efficient. Dynamic simulation shows the process in the real time unsteady state and ProDyn is a powerful dynamic tool. A user-friendly interface provides the capability to learn and test the various dynamic operations of a process model.

These tools are web enabled and open platform communications (OPC) compliant, allowing direct connection with distributed control systems (DCS), supervisory control and data acquisition (SCADA) / human machine interfaces (HMI), reactor algorithms and other third party packages.

Key features

- Rigorous process simulation
- Freeze/unfreeze operation
- Faster/slower than real time
- Simulated malfunctions
- Trend displays
- Trends in exportable spreadsheet format
- Start-up and shutdown scenarios
- Alarm management system
- Automatic training exercises
- Trainee performance evaluation
- Multiple access levels
- Exporting to third party applications
- Direct connection with DCS or emulation
- Large library of generic models

Benefits of using ProDyn

- High level of operator engagement
- Reduced training costs
- Faster reaction time in the event of an incident
- More consistent process performance across all shifts
- Integration with multiple simulation and modelling engines
- Ability to benchmark operator performance consistently
- Cloud-enabled deployment

Applications

- Operator training and learning systems
- Abnormal situation management
- Process troubleshooting
- Resolving unstable operations
- Revamp studies
- What-if studies
- Technology showcasing
- DCS/logic testing
- Equipment evaluation
- Develop and test plant procedures

Solutions

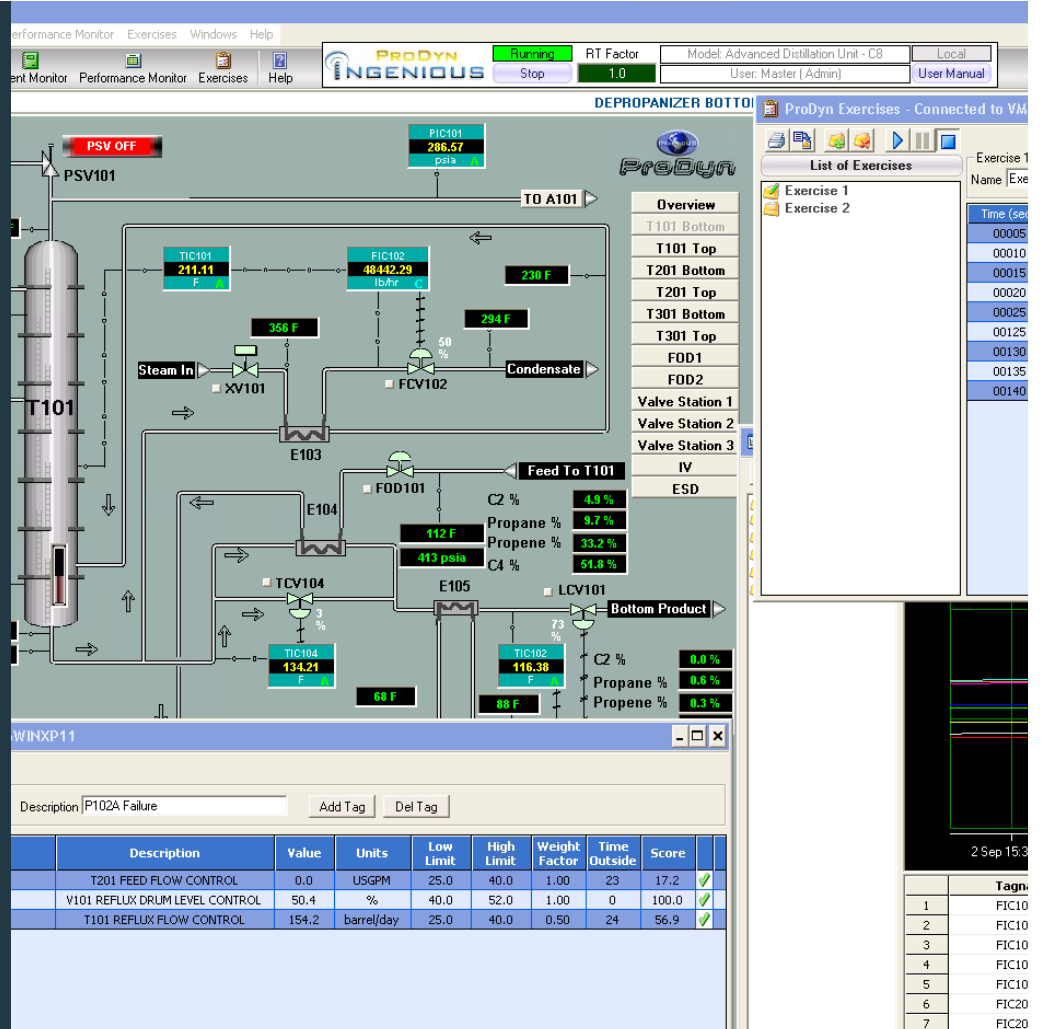
- Custom dynamic simulation models
- Standard (off-the-shelf) dynamic models
- Training needs analysis

Cloud deployment

This is a powerful and unique feature in ProDyn that allows online connection. Operators can be trained anywhere in the world with the instructor monitoring the performance of the operators from each location. All models are based on first principles of engineering with a physical component properties database.

For more information visit:

www.woodgroup.com



ProDyn standard models offered

A series

- A1 - Tank model
- A2 - Basic centrifugal pump
- A3 - Heat exchanger
- A8 - Interacting controllers
- A11 - Flash tank
- A12 - Condenser
- A13 - Reboiler
- A14 - Air cooler
- A16 - Steam turbine
- A17 - Batch reactor
- A18 - Continuous stirred tank reactor (CSTR)
- A19 - Plug flow reactor
- A20 - Fixed bed reactor

B series

- B1 - Basic controls (gasslab plant A)
- B2 - Liquid-liquid extraction (gasslab plant B)
- B3 - Fixed bed reactor (gasslab plant C)
- B4 - Ion exchange (gasslab plant D)
- B5 - Distillation unit (gasslab plant E)
- B6 - pH control (academic) (gasslab plant E)
- B7 - Tanks in series
- B8 - Mixing vessel
- B9 - Steam boiler with three element level control
- B10 - Reciprocating compressor
- B11 - Compressor with anti-surge control
- B13 - Reverse osmosis unit
- B14 - Basic unit operations

B15 - Instrumentation II

- B16 - Natural draft fired heater
- B17 - pH control (industrial)
- B18 - Gas turbine
- B19 - Three phase separator
- B20 - Ethylene glycol - water distillation
- B21 - Depropanizer
- B22 - Multiple effect evaporator

C series

- C1 - Crude distillation unit (CDU)
- C2 - Amine treating unit
- C3 - Natural gas liquefaction
- C4 - Gas concentration unit
- C5 - Naphtha hydrotreater
- C7 - Vacuum distillation unit
- C8 - Advanced distillation unit
- C9 - Sulfur recovery unit
- C10 - Sour water stripper unit
- C11 - Naphtha splitter
- C13 - Product fractionator
- C14 - Wet gas compressor
- C15 - Triethylene glycol (TEG) dehydration unit

D series

- D1 - Hydrogen plant
- D4 - Oil and gas platform
- D5 - Power plant (coal fired)
- D7 - Power recovery train (PRT)