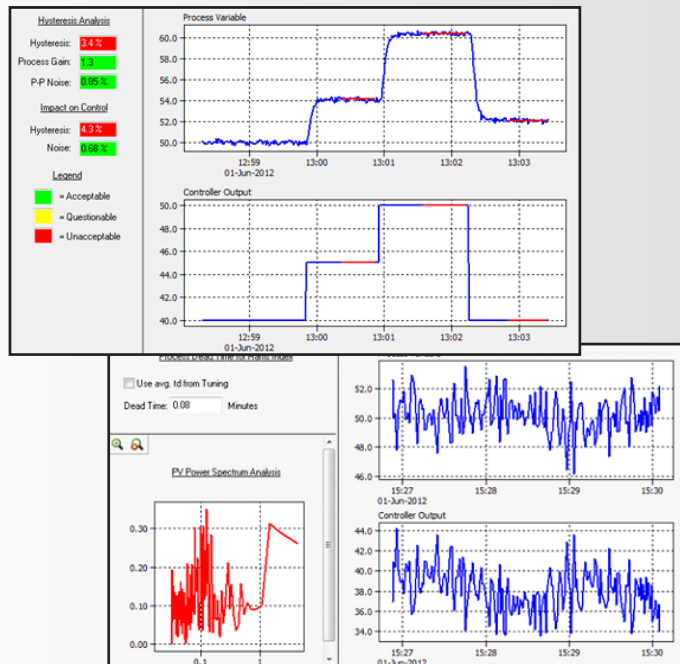


TuneWizard provides control loop tuning capabilities to improve process safety and efficiency.



## Key Benefits:

- Enhanced Process Safety
- Decreased Process Variability
- Increased Plant Reliability
- Improved Preventive Maintenance
- Lower Operating Costs
- Optimal Process Operation

## The Challenge

In the average plant, many PID controllers do not function at an acceptable or optimal performance level due to instrumentation issues and/or lack of proper tuning. Many valves do not function properly due to mechanical issues, and more than two-thirds of PID controllers are not tuned optimally. This can lead to abnormal situations and system instability, which adversely affects process safety, efficiency, and profitability.

## The PAS Solution

TuneWizard improves control loop performance using a comprehensive approach by thoroughly assessing various control elements.

TuneWizard assesses the following:

- Process variability (linear and nonlinear)
- Control elements (valves and measuring devices)
- Control objectives
- Controller type and tuning methodology
- Closed loop performance evaluation (setpoint response, disturbance rejection)
- Closed loop system robustness

TuneWizard provides the essentials for control loop optimization by calculating optimal PID controller and filter settings, therefore eliminating the guesswork out of tuning.

TuneWizard allows you to:

- Highlight control valve deficiencies to pinpoint the cause of poor performance
- Minimize time-consuming trial and error tuning
- Tune for long-term performance (setpoint response and disturbance rejection)
- Balance control performance and robustness
- Test new controller settings with simulations prior to making online changes
- Document work for future reference



Oil & Gas      Refining  
 Metals & Mining      Chemicals  
 Pulp & Paper      Power

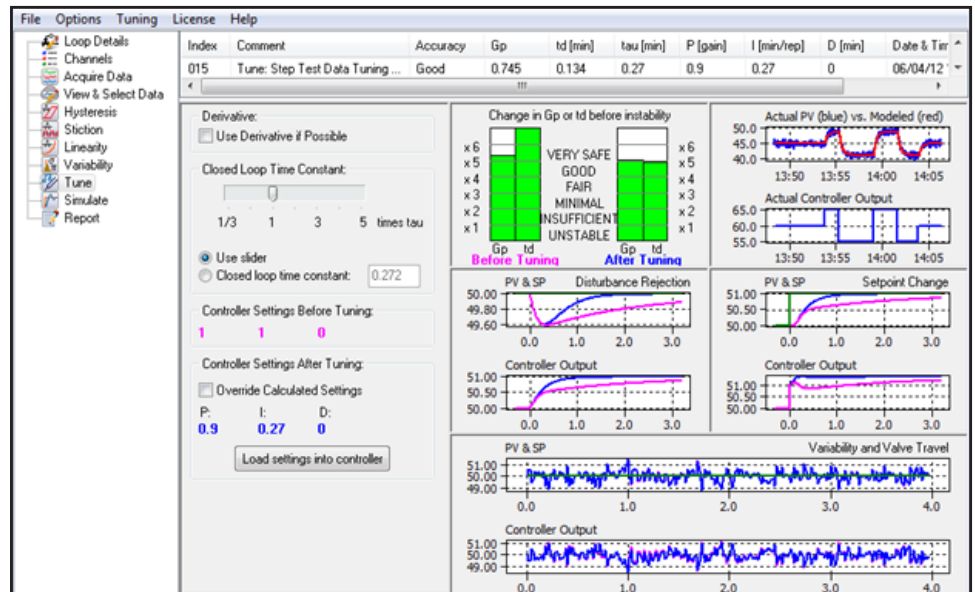


Figure 1: Example of TuneWizard User Interface

## About PAS

PAS is the leading global solution provider of ICS cybersecurity, process safety, and asset reliability in the energy, power, and process industries.

Our comprehensive portfolio includes solutions for industrial control system cybersecurity, automation asset management, and operations management which includes alarm management, IPL assurance, high performance HMI, boundary management and control loop performance management.

## Contact Us

PAS Headquarters  
 13101 Space Center Blvd.  
 Suite 500  
 Houston, TX 77059

Phone: +1.281.286.6565  
 Fax: +1.281.286.6767

Website: [www.pas.com](http://www.pas.com)  
 Email: [sales@pas.com](mailto:sales@pas.com)

## PID Controller Analysis and Tuning

TuneWizard provides all the crucial capabilities for control loop optimization in an intuitive software package. TuneWizard's powerful diagnostics, process model identification, controller tuning and simulation, performance evaluation for setpoint response and disturbance rejection, closed loop system robustness assessment, and reporting/documentation capabilities differentiate it from its industry competitors.

Figure 1 presents TuneWizard's tuning interface, which displays various types of analyses. Using process data, a model is developed which is used to tune the controller according to a chosen tuning criterion. The closed loop performance is simulated and displayed for setpoint and disturbance (load) changes and contrasted to that of the old tuning parameters. TuneWizard also assesses the closed loop robustness, which measures the ability of the controller to perform efficiently as the underlying process changes. Using the slider, the user can adjust the tuning parameters and evaluate the impact on control performance and robustness. Once the optimal tuning parameters have been established, the user may automatically or manually load the new settings into the control system.

## Technology Differentiators

- User-friendly interface
- Full integration with all control systems for streamlined data acquisition
- Tuning for long-term performance by balancing control response and robustness
- Transparency of tuning documentation and reporting
- Beneficial for both the novice and experienced user

For questions about TuneWizard, please email [sales@pas.com](mailto:sales@pas.com) or contact us.