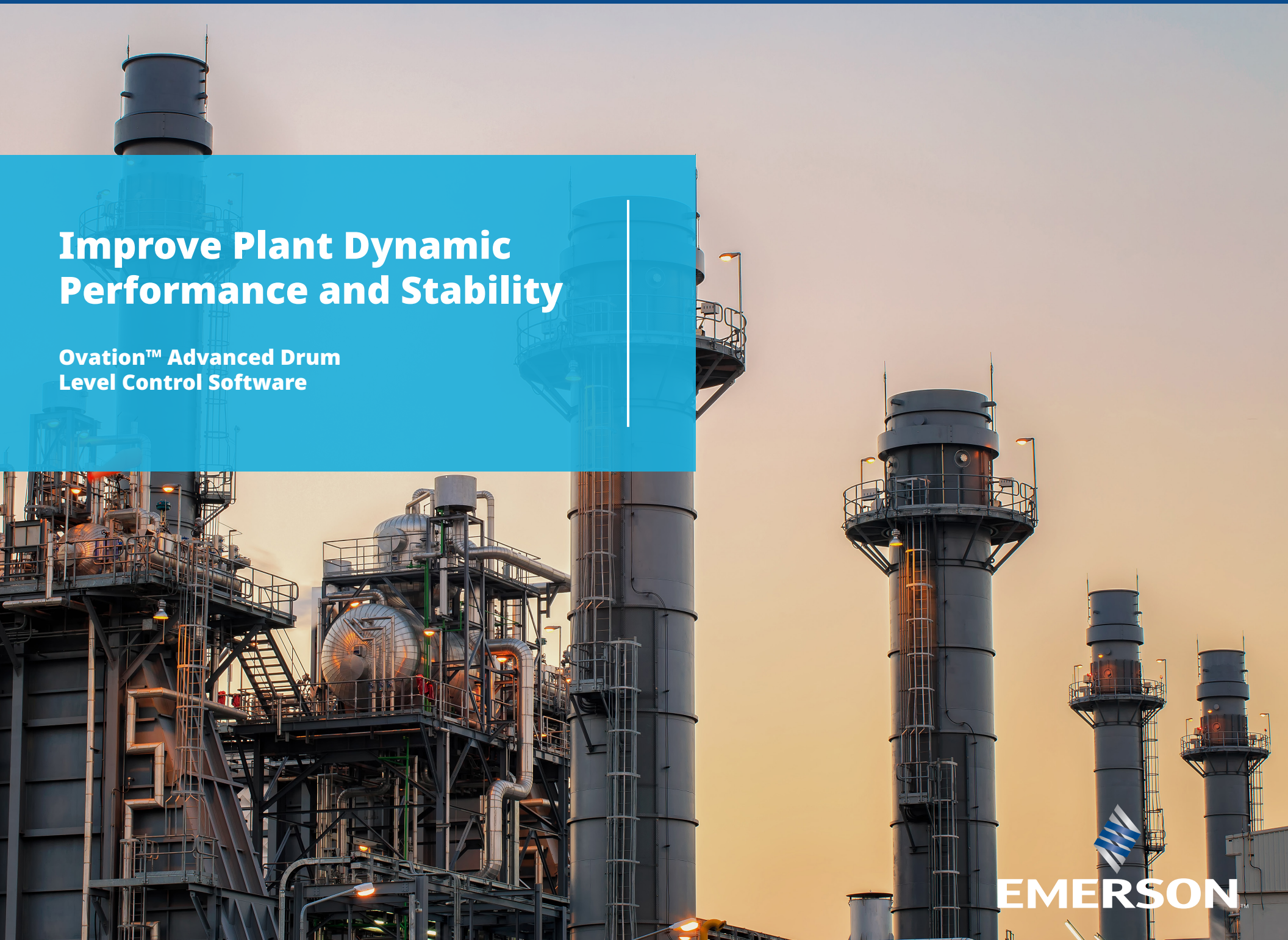


Improve Plant Dynamic Performance and Stability

Ovation™ Advanced Drum Level Control Software

EMERSON™

The Challenges of Conventional Drum Level Control Strategies

Are your drum level controls failing to predict and smartly manage faster ramp rates and trips induced by significant transient process events?

Conventional drum level control strategies often sacrifice plant dynamic performance to maintain stability under non-steady-state conditions.

For today's conventional power generation fleet, drum level trips induced by significant transient process events are one of the leading contributors to reduced plant reliability.

By implementing a modern, evolved method of advanced drum level control, limitations in conventional control implementations can be overcome.

Combining embedded transient-level response models with the impacts of physical drum characteristics simultaneously improves drum level stability and control performance over the entire operating range.

Consider your current drum level control strategy:

- **Do you wish you could achieve better control stability while operating at higher ramp rates?**
- **Would less wear and tear on your drum level control valves help your O&M budget?**
- **Do you need smarter drum level controls for responding to transient events?**

EMERSON

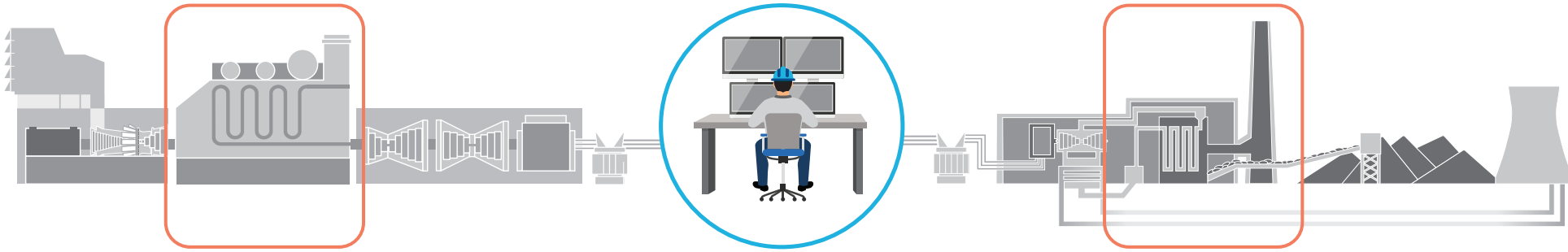
Ovation™ Advanced Drum Level Control Software

Improve dynamic performance and unit resilience by proactively managing transient operating conditions

In the current operating environment, conventional power generating assets must respond to the variable generation from renewable resources. Responding quickly and effectively to load changes places greater demand on the dynamic control capability of conventional units.

The Ovation advanced drum level control solution addresses these challenges, allowing you to operate with confidence at the limits of your allowable equipment ramp rates. The application provides increased operational flexibility that enables better response to changing system or market conditions, maximizing your performance while minimizing reliability risks.

Emerson's Ovation advanced drum level control software uses embedded predictive control capabilities to improve dynamic control performance and reliability. By intelligently controlling drum levels through transient events, the application increases the stability and resilience of this critical process area.



Stable

Enhance control stability by intelligently steering through transient process conditions in ways that conventional control cannot.

Accurate

Efficiently and precisely maintain the optimal drum level setpoint using embedded model-based control technology.

Dynamic

Dynamically improve drum level response to load rejection events by de-coupling transient level impacts from the fundamental mass balance relationship.

Reliable

Increase accuracy and reliability of drum level performance by minimizing process and equipment stress and reducing the risk of trip events.

EMERSON

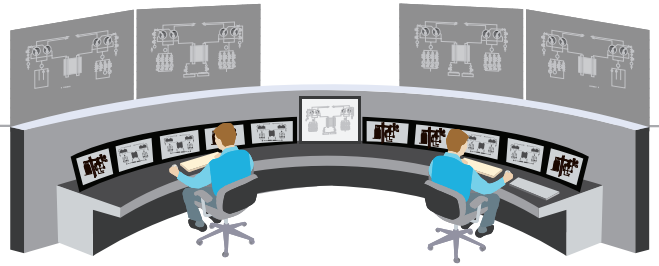
Ovation™ Advanced Power Applications

A suite of software applications that improve operational flexibility, increase reliability and availability and optimize environment performance

Emerson's Ovation™ automation technology was designed from the ground up to help customers achieve operational excellence and create a sustainable competitive advantage.

The Ovation platform's broad range of field-proven control design techniques leverage over five decades of expertise to provide tighter, more precise and reliable process control. Embedded advanced power applications further enhance operations by automatically balancing performance or economic improvement opportunities to deliver optimum results.

Installed applications provide immediate operational and financial returns that can offset alternative capital expenditures. Emerson's high-value and low-risk software, developed using advanced algorithms and modeling methods, is field-proven to provide sustainable benefits that address specific control challenges.



- Advanced Bypass Control
- SCR Optimization
- Response Optimization
- Duct Burner AGC Control
- Dynamic Rotor Stress Advisor
- Advanced Drum Level Control
- Advanced Pump Protection
- Steam Header Blending
- Advanced Inlet Pressure Control
- Procedural Integration
- Performance Optimization
- Steam Temperature Optimization

EMERSON

For more information visit
www.Emerson.com/Ovation

EMERSON™

PWS_010896 [R1]