



Improve Plant Operational Flexibility and Extend Lifespan

Ovation™ Steam Temperature
Optimization Software



EMERSON™



The Challenges of Changing Operating Profiles

Are your steam temperature controls unable to adjust to highly variable operating profiles and the associated transient conditions?

The evolving nature of the power industry is changing the operating profiles of traditional gas and coal generators, demanding them to manage the variability of renewable generating resources now feeding the bulk power system.

The initial control implementation of certain critical processes, such as steam temperature control, was not designed around their current operating profile which can lead to operational and equipment lifecycle challenges.

A more flexible operating environment requires traditional plants to actively increase or decrease load in real time in response to renewable energy variability on the grid, however, this places greater demand on a plant's dynamic control capability to manage the challenging transition of mechanical energy to electrical energy.

Consider your current steam temperature control strategy:

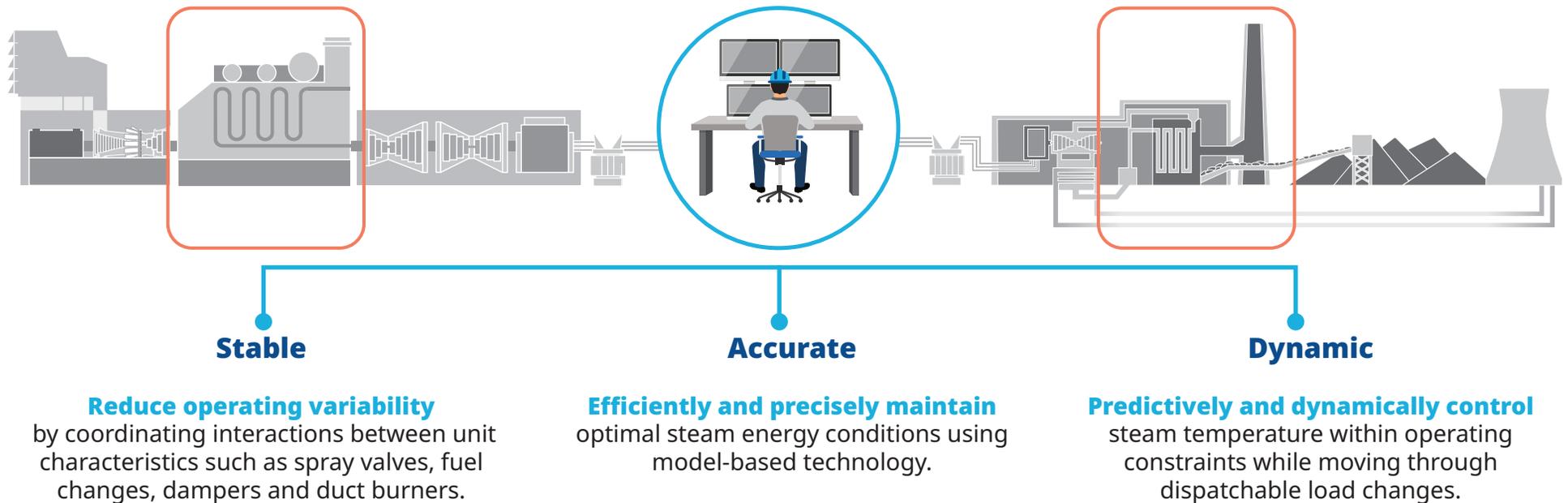
- **Are you losing production efficiency to manage a dynamic operating profile?**
- **Can your control logic proactively respond to changes in load with predictive intelligence?**
- **Are you interested in limiting the mechanical wear and tear of your attemperation equipment?**

Ovation™ Steam Temperature Optimization Software

Advanced steam temperature control supports increased ramp rates and unit reliability

Emerson's Ovation™ steam temperature optimization software removes conventional control limitations by using model-predictive control with the embedded intelligence of the underlying process to predictively and proactively manage the change in steam energy conditions associated with significant load changes.

The Ovation advanced steam temperature application anticipates changes in steam production from changes in combustion turbine energy, boiler fuel input or duct burner output to respond to changing process conditions in real time, resulting in more stable superheater and reheater temperature control. This helps optimize efficiency by keeping steam temperature closer to its maximum efficiency point during transient and cycling operations while minimizing the risk of high-temperature excursions.



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 software and 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. Integrated 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



Advanced Drum Level Control



Advanced Inlet Pressure Control



Advanced Pump Protection



Control Loop Tuning



Duct Burner AGC Control



Dynamic Rotor Stress Advisor



Procedural Integration



Performance Optimization



Response Optimization



SCR Optimization



Steam Header Blending



Steam Temperature Optimization

For more information visit
www.Emerson.com/Ovation



PWS_003934 [7]

The Emerson logo is a trademark and service mark of Emerson Electric Co. All other marks are the property of their respective owners. ©2023-2024 Emerson. All rights reserved.

