



**KEY ADVANTAGES TO UPGRADE**

**203**

True hydraulic two out of three voting system composed of robust and simple direct acting solenoid valves.

**100%**

100% reliability – no manual isolation valves located in the trip valve dump line. Inadvertent operation of isolation valves is impossible even after many years of operations.



On-line testing is performed periodically without operator intervention. The test cycle is scheduled and recorded by your plant DCS.



Allows standardization across all your critical turbines using hydraulically operated Trip valves. This further increases reliability of operation and reduces maintenance cost of critical components of your installations.

## Turbine Trip System 203

**The Turbine Trip System 203 takes away critical tasks from your plant operators! It's designed to function without operator intervention. It performs periodic trip system health checks automatically and reports out at your plant DCS interface.**

**203**

AST  TURBO

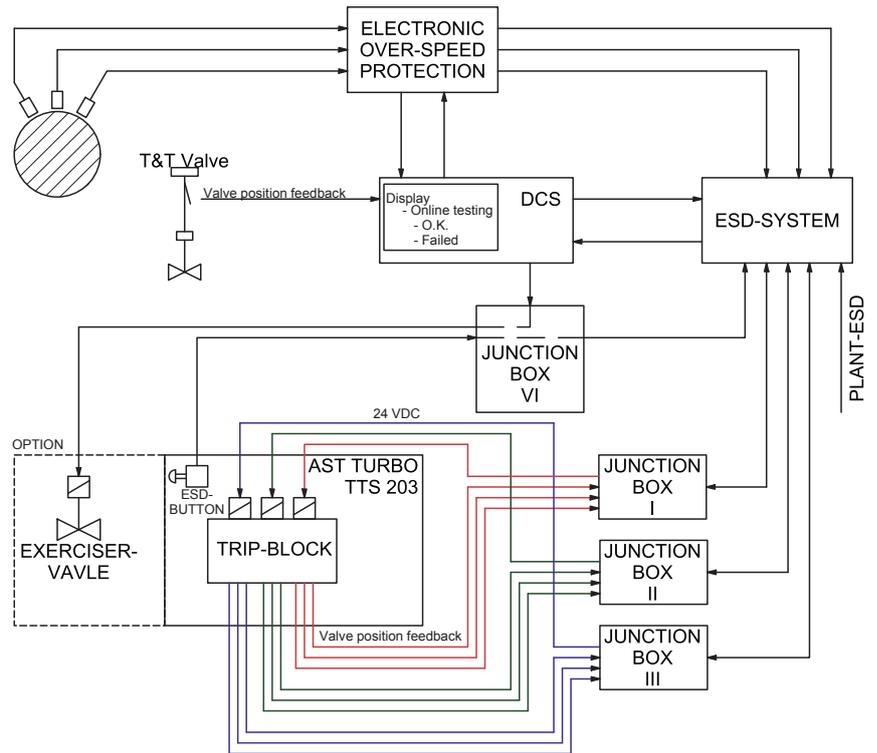
**Turbine Trip System**

Our Field Engineers experienced various occasion where turbine trip valves wouldn't close when dismantling them during turnarounds. Without detailed investigation it became obvious: The manual exercising function was hardly used and thus the reliability of the valve was rendered questionable at best. Truth of the matter is that the exercising of a trip valve in a live plant fearing a shutdown is often thought to be a 'career limiting move'. Thus, more

often than not, trip valves remain in the fully open position, year in year out, with the inherent risk of seizing in the open state. A closer analysis of the hydraulic trip arrangements reveals inconsistent trip philosophies, far removed from today's state-of-the-art 2 out of 3 voting systems, standardized decades ago in the control rooms on the electronic side.

The AST Turbo Turbine Trip System 203 takes care of both. It provides a trip solenoid arrangement with highest reliability figures in true 2 out of 3 voting configuration and it performs the exercising of your trip valve: periodically and automatically.





Its simplicity increases reliability from the construction aspect (fewer components), operator perspective (no intervention) and maintenance point of view (standardized product).

There is no gauge to check, no hand valve to manipulate, no needle valve to adjust or P&ID to be studied. The Turbine Trip System 203 takes care of your turbine trip function without any bells and whistles. Should field parameters indicate some issue, it will tell you before your turbine ends up in a mess!

AST Turbo Turbine Trip System 203 is a system that standardizes all your hydraulic trip systems to a single design, easy to understand and – most importantly – with built-in reliability.

#### The design features are:

- ▶ True 2 out of 3 voting hydraulic solenoid valve
- ▶ No isolation valves in the trip line
- ▶ Periodic automatic on-line exercising of the hydraulic trip system without impacting trip function
- ▶ Periodic automatic on-line exercising of the trip and throttle valve
- ▶ Allows on-line repair of critical components
- ▶ Rack mounted, fully assembled and tested
- ▶ Rugged, modular construction ensures maximum reliability
- ▶ Allows standardization across the plant

The Turbine Trip System 203 is operated by your existing plant DCS and ESD systems. Your current systems will be programmed to control and monitor the new trip system. Additionally your current DCS/SCADA will inform you that the AST Turbo Turbine Trip System 203 is operating reliably!

The Turbine Trip System is designed to improve trip function reliability and reduce down time for your critical steam turbines – all of them!

#### VISIT US

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