

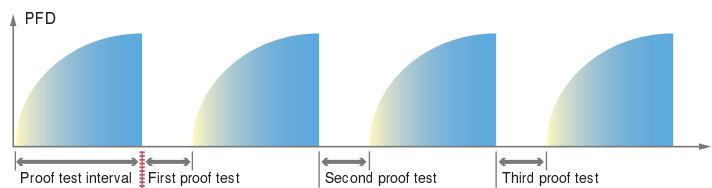


Plant Resource Manager
Centralized Asset Management and
Intelligent Diagnostics

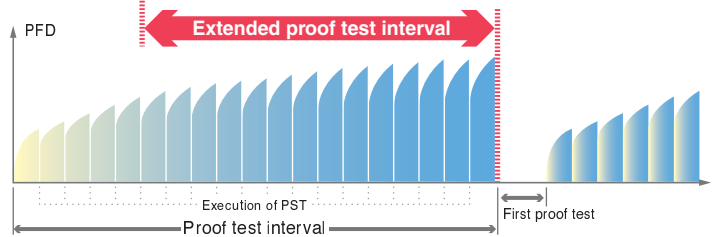
Challenges

Is it realistically possible to do an annual FST (full stroke test or proof test) for hundreds of safety valves?

The International Electrotechnical Commission (IEC) required the FST to be conducted annually for safety valves.



Plant shutdown may be necessary during the proof test period. (This is costly and time-consuming.)



The proof test interval can be extended as valves can be checked frequently during plant operation. (The extended time period before a plant-wide shutdown achieves increased operation efficiency.)

PFD: probability of failure on demand

Solutions

By executing a PST (partial stroke test) once a year, it is now possible to extend the interval between costly and time-consuming FSTs up to three years.

The field digital technology allows operators to remotely schedule a PST for any emergency shutdown (ESD) valve from a major vendor, minimizing the risks of manual on-site operations. PRM and PST Scheduler make this possible.

Note: For detailed information on PST-based valve diagnosis and the relationship between the PST interval, proof test interval, and PFD value, refer to the documentation from each valve vendor.



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Performance

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Asset Excellence

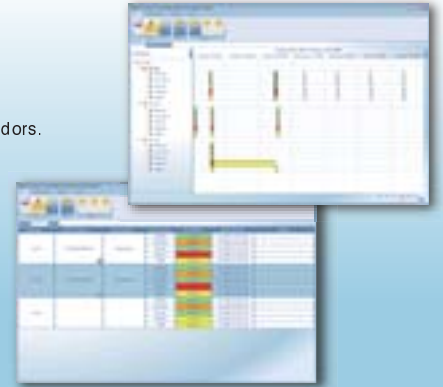


PRM and PST Scheduler

Operating under PRM, PST Scheduler remotely executes the PST provided by the safety valve vendor, and records the results. Testing is efficient and well planned and results are shown on a single screen without any additional hardware or software. Only Yokogawa's PRM and PST Scheduler support safety valves from multiple vendors.

Features of PST Scheduler

- Schedule:** Week, Month, Year, On-demand
- Mode:** Manual, Semi-automatic, Automatic
- Execution:** Serial, Parallel
- Operation:** Execute, Pause, Resume, Skip
- Recording:** PST results



Maximize safety system performance

Yokogawa's ProSafe-RS Safety Instrumented System is SIL3 certified even in a single modular configuration. Execution of PSTs on a fixed schedule is key to ensuring that a safety system will function correctly in an emergency. The combination of ProSafe-RS and PRM with PST Scheduler not only simplifies the management of safety devices, it maximizes safety system performance. In addition, no additional wiring or hardware such as a multiplexer is needed to manage safety devices.

Optimal flexibility in valve selection



The Vigilant Integration Partners (VIP) program is an open, non-exclusive, standard-based, and interoperability-driven initiative that enables users of Yokogawa's ProSafe-RS Safety Instrumented System and PRM asset management system to use best-in-class field devices from Dresser Masoneilan, Flowserve Corporation, Metso, and SAMSON AG.

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The clear path to operational excellence

SEE
CLEARLY

KNOW
IN ADVANCE

ACT
WITH AGILITY

VigilantPlant is Yokogawa's automation concept for safe, reliable, and profitable plant operations. VigilantPlant aims to enable an ongoing state of Operational Excellence where plant personnel are watchful and attentive, well-informed, and ready to take actions that optimize plant and business performance.

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