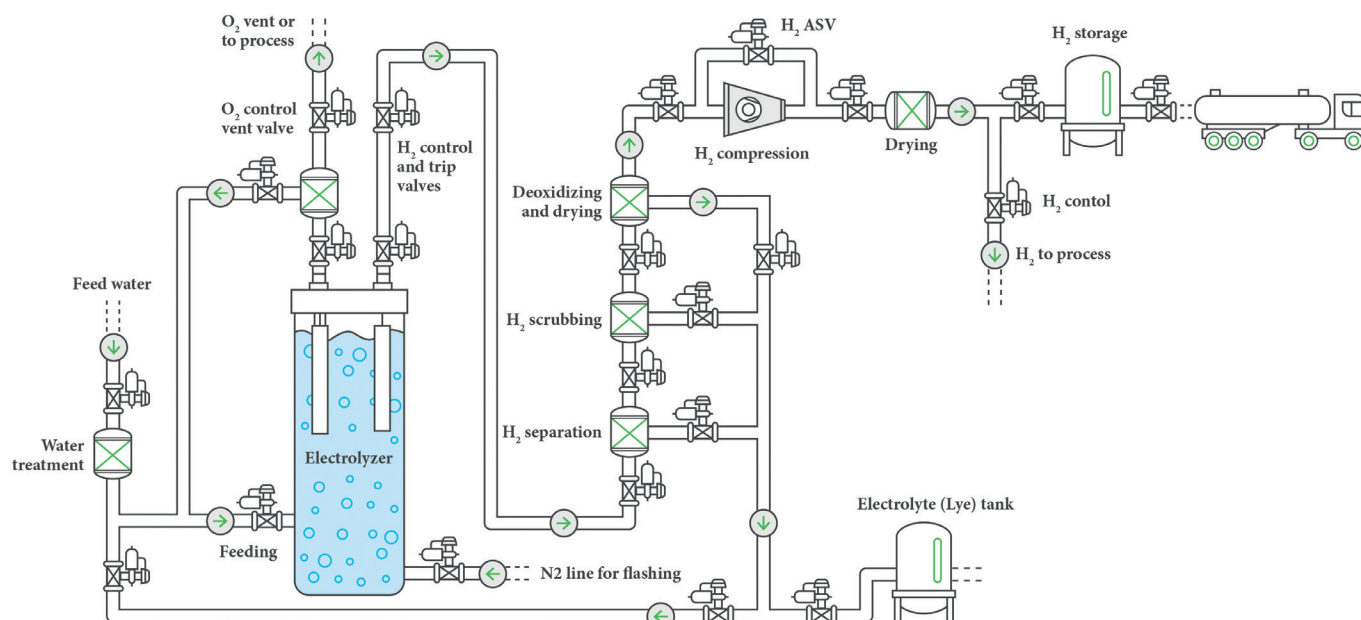


Neles and Jamesbury valve maintenance recommendation for water electrolyzers

Applicable to both Proton Exchange Membrane (PEM) and Alkaline Water (AWE) electrolyzers



Lye, demin water service valves	Electrolysis feed	5 years	10 years
		Replace soft parts, check internals and pneumatics and replace parts if they are damaged, download and analyse positioner diagnostics.	Replace soft parts, seat, bearings, actuator leverage assembly, pneumatics, check internals & replace parts if they are damaged, download & analyse positioner diagnostics.
Oxygen service valves	Outlet electrolysis	5 years	10 years
		Replace soft parts, check internals and pneumatics and replace parts if they are damaged, download and analyse positioner diagnostics. It's imperative valves be handled & maintenance performed by competent personnel trained on oxygen risks, in premises suitably designed for oxygen service cleaning.	Replace soft parts, seat, bearings, actuator leverage assembly, pneumatics, check internals & replace parts if they are damaged, download & analyse positioner diagnostics. It's imperative valves be handled & maintenance performed by competent personnel trained on oxygen risks, in premises suitably designed for oxygen service cleaning.
Nitrogen service valves	Flashing	5 years	10 years
		Replace soft parts, check internals and pneumatics and replace parts if they are damaged, download and analyse positioner diagnostics.	Replace soft parts, seat, bearings, actuator leverage assembly, pneumatics, check internals & replace parts if they are damaged, download & analyse positioner diagnostics.

Neles and Jamesbury valve maintenance recommendation for water electrolyzers

Hydrogen service valves	Outlet electrolysis	5 years	10 years
		Replace soft parts, check internals and pneumatics and replace parts if they are damaged, download and analyse positioner diagnostics.	Replace soft parts, seat, bearings, actuator leverage assembly, pneumatics, check internals & replace parts if they are damaged, download & analyse positioner diagnostics.
	Dryer sequencing	2-3 years or 7500 cycles	5 years or 15000 cycles
		Replace soft parts, check internals and pneumatics and replace parts if they are damaged, download and analyse positioner diagnostics.	Replace soft parts, seat, bearings, actuator leverage assembly, pneumatics, check internals & replace parts if they are damaged, download & analyse positioner diagnostics.
	Compressor anti-surge	On a regular basis i.e. 6 months to 1 year	5 years
		Check performance and operation on site, test equipment reaction, visually inspect components.	Replace soft parts, check internal and pneumatics and replace parts if they are damaged, download and analyse positioner diagnostics.
Other valves		5 years	10 years
		Replace soft parts, check internals and pneumatics and replace parts if they are damaged, download and analyse positioner diagnostics.	Replace soft parts, seat, bearings, actuator leverage assembly, pneumatics, check internals & replace parts if they are damaged, download & analyse positioner diagnostics.

Valmet can recommend spare products and spare parts for commissioning and startup and to be kept as operational stock in order to address damage to equipment in a timely manner.

During maintenance Valmet technicians check parts that are not mentioned and replace damaged parts if possible. Valmet technicians also make recommendations for future inspection and maintenance.

Positioner diagnostics help monitor valve condition and performance between outages as well as determine whether a particular valve needs attention. Positioner diagnostics also contribute during outages to the quality and effectiveness of maintenance with the aim of maximizing reliability, performance and valve lifetime.

Valmet supports its customers in leveraging valve positioner, control loop and OEM data to predict and prevent valve-related issues, facilitate planning and prioritize actions. Contact us for more info on digitalization and AI-based services.

Wearing out of devices:



Bearing, packing and sealing elements



Lever arm, bearings and sealing elements



Valve controller components



Instrumentation components

Operational benefits:



Improved plant availability



Optimized performance



Ensured quality



Improved safety



Ensured environmental compliance