

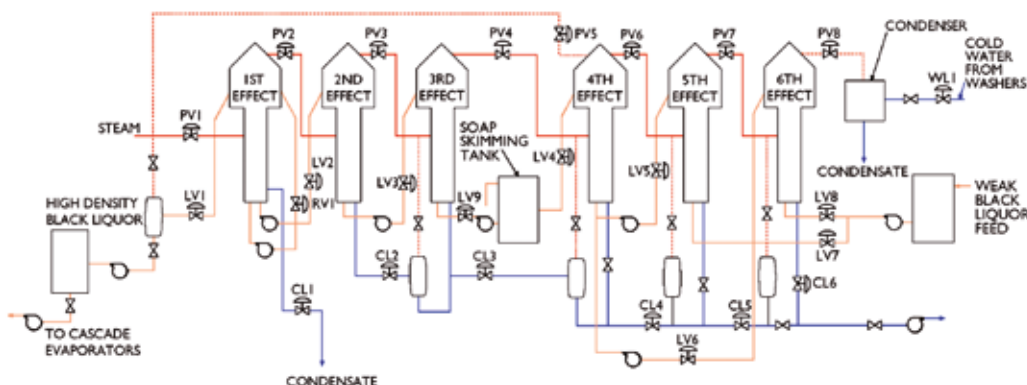
Minimize plant risks

Following the valve manufacturer's maintenance recommendations ensures plant availability.

Maintenance recommendation for Neles valves in black liquor evaporation process Including recovery boiler burner valves

Valves	Maintenance scope		
	Inspection	Minor maintenance	Major maintenance
Maintenance intervals			
Effects 1,2 and recovery boiler burner valves	Every 2 years	Every 4 years	Every 6 years
Effects 3 - 6 valves	Every 4 years	Every 8 years	Every 12 years
Maintenance scope with required spare parts	Workshop inspection + spare part set	Workshop inspection + spare part set + seat & bearings	Workshop inspection + spare part set + seat & bearings + trim parts

Typical 7-stage black liquor evaporating plant



Neldisc triple eccentric disc valve



V-port segment valve, series RA



M-series ball valve



Operational benefits:



Improved plant availability



Optimized performance



Ensured quality



Improved safety

Minimize plant risks

Following the valve manufacturer's maintenance recommendations ensures plant availability.

Maintenance recommendation for Neles rotary actuators and ND9000 / NDX series valve controllers in black liquor evaporation process Including recovery boiler burner valves

Neles rotary actuators	Maintenance scope	
	Inspection	Maintenance
Maintenance intervals	Every 6 years	Every 12 years
Maintenance scope with required spare parts	Workshop inspection + spare part set	Workshop inspection + spare part set + linkage assembly & cylinder

ND9000 / NDX valve controllers	Maintenance scope	
	Inspection	Maintenance
Maintenance intervals	Every 5 years	Every 10 years
Maintenance scope with required spare parts	Workshop inspection	Workshop inspection
NDX	Download and analyse diagnostics Calibrate, reset counters + prestage bottom filter and silencers	Download and analyse diagnostics Calibrate, reset counters + pneumatic set + silencers
ND9000	Download and analyse diagnostics Calibrate, reset counters	Download and analyse diagnostics Calibrate, reset counters + prestage unit + spool valve assy

Wearing out of devices:

Lever arm, bearings
and sealing elements



Valve controller
components



Valve controller
components



Obsolete ND8 valve controllers are recommended to upgrade with ND9 or NDX -series valve controllers.

Operational benefits:



Improved plant
availability



Optimized
performance



Ensured
quality



Improved
safety