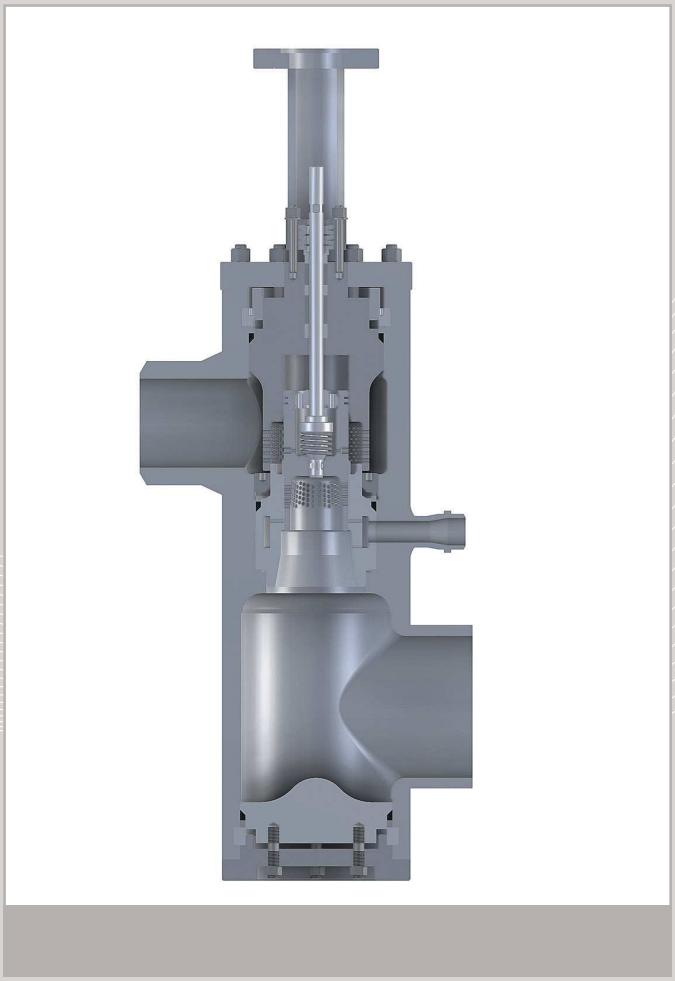
HCVZC1 Valve



Application

HCVZC1 steam conditioning valve combines pressure and temperature control in a single valve. Temperature reduction is up to water (e.g., feedwater) injection under high pressure conditions. HCVZC1 type is commonly used as turbine start or discharge valve.

Description

HCVZC1 is substantially modified HCVZ1 valve, so-called Z-type, where outlet and inlet connection pipes are not in line, but parallel to each other. Coolant, i.e. water, is injected under the plug. Basically, the valve consists of: forged body, self-sealing inner bonnet integrated with cage, which drives main plug (perforated, pressure balanced by inner plug–so called pilot plug). The slip-in seat (pressed by screw plug) has nozzles responsible to deliver adequately sprayed water, supplied to the body through one or two connection pipes. A medium undergoes single-stage expansion. In case of perforated plug, only its perforation is responsible for pressure reduction; the cage does not. The main plug also opens water nozzles one after another; the pilot plug does not. HCVZC1 valve works with media flow directed over the plug. Its construction allows to increase the number of expansion's steps (additional appliances are assembled on the outlet connection pipe). Any control of coolant's flow demands an implementation of additional injection valve. HCVZC1 valve also has the special version: with unbalanced plug.

Technical data

	inlet	outlet	connection pipe of injected water
Nominal diameter	DN50÷DN300	according to patron's demand	DN15÷DN50
Nominal pressure	PN40÷PN400	PN16÷PN400	PN40÷PN400
Connections	welding ready		welding ready
Flow coefficient Kvs	40÷1300 m^3/h		
Body	1.0460 (P250GH) 1.5415 (16Mo3)	1.7335 (13CrMo4-5) 1.7380 (10CrMo9-10)	1.7715 (14MoV6-3) 1.4903 (X10CrMoVNb9-1)	1.4901 (X10CrWMoVNb9-2)
Plug	1.4541(X6CrNiTi18-10)	1.4057(X17CrNi16-2)	1.4125 (X105CrMo17)	
Seat	1.4541(X6CrNiTi18-10)	1.4057(X17CrNi16-2)	1.4125 (X105CrMo17)	
Stem	1.4057 (X17CrNi16-2)	1.4923 (X22CrMoV12-2)		
Hardening of the inner parts	stelliting; nitriding; hardening			
Rangeability	50:1			
Leakage class	metal/metal sealing–IV (standard); V (improved)			
Body's gland	trapezoid, graphite			
Seal bushing	graphite			

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