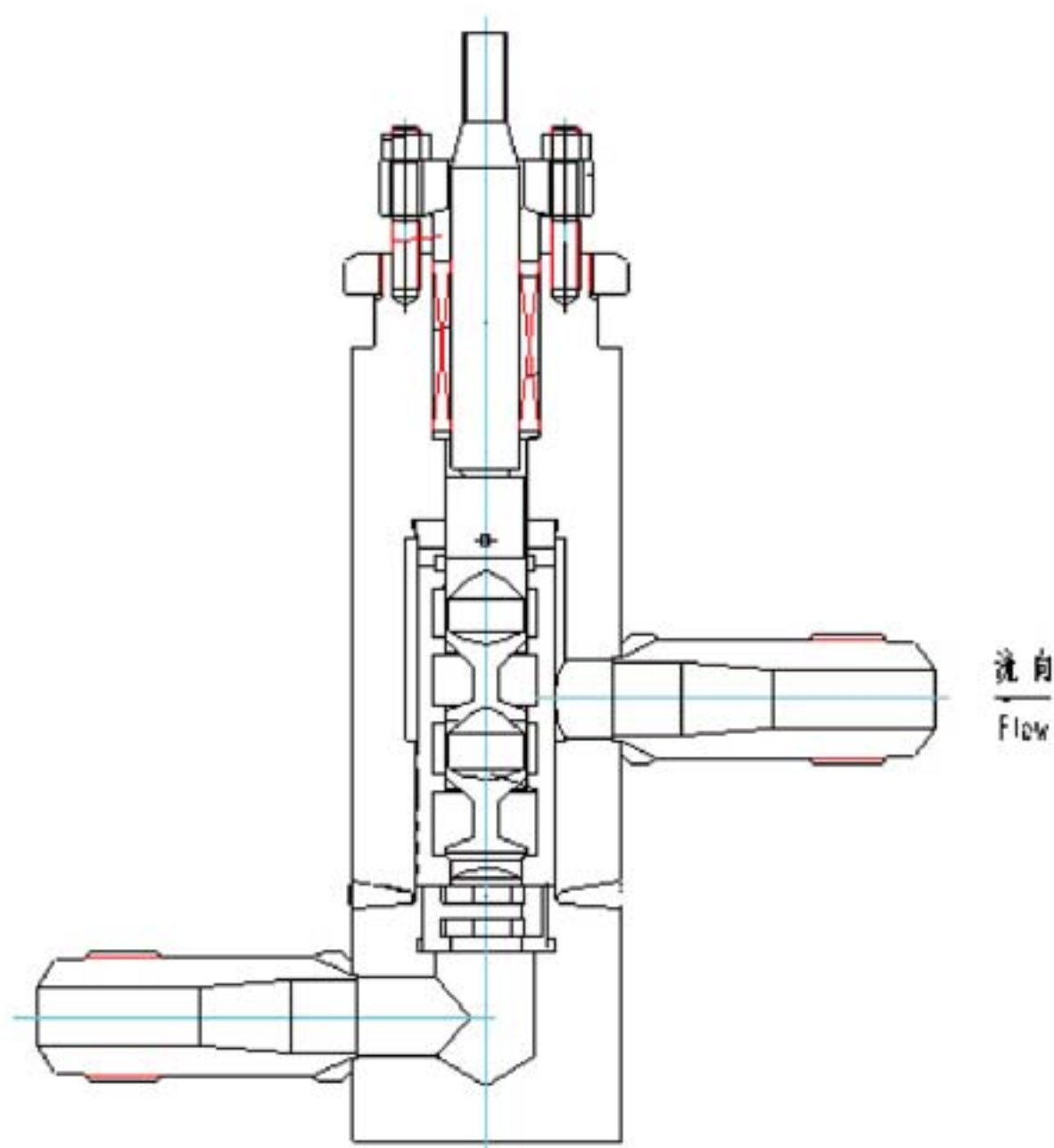


HTK

锅炉连续排污调节阀

BOILER CONTROL BLOW DOWN
CONTROL VALVE



HTK 锅炉连续排污调节阀

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概要:

HTK 锅炉连续排污调节阀是一种防空化的多级节流调节阀,也叫高压差调节阀,这是一种结构新颖的调节阀。该阀主要用于发电厂连续排除锅炉水中溶解的部分盐分,它是发电厂控制高压差饱和水的关键阀门之一。也可应用在石油、化工工业控制高压降饱和流体的流量。

HTK 锅炉连续排污调节阀具有以下优点:

- 1、流体逐级降压,流体方向不断改变,增加流体阻力,控制流体速度,防止空化破坏,阀内允许压差 25MPa。
- 2、多级节流:流体通道逐级扩大,适合饱和流体随压力降低饱和水变成蒸汽容积扩大的特性,减少流体冲刷腐蚀。
- 3、节流面与密封面分开,阀芯与阀芯套表面渗氮硬化处理,硬度达到 HRC70 左右,关闭严密,寿命长。
- 4、阀芯表面开有大缺口,流体含有 2~3mm 焊渣等固体颗粒,阀芯也不会卡死,动作灵活。
- 5、阀体全部采用整体式结构,即不用上阀盖,目的是消除阀体与上阀盖之间的介质泄漏点。
- 6、大部分零件与 HTN-1 减温水调节阀通用,互换性好。

General

HTK control valve characterized by anti-cavitation multi-stage throttling for high differential pressure. Its structure is unique. It is a key control valve in controlling high pressure saturation water in generating electricity plant. Also, It is suitable for applications of high pressure saturation fluid in petroleum, chemical industry.

The Control valve has following advantages:

- 1、The multi-stage underpressure controls velocity of flow and prevents from cavitating by forcing the process fluid to follow a tortuous path. The allowance pressure drop is within 25MPa.
- 2、The multi-stage throttling: Because the flow passage enlarges step by step, the valve is applicable the characteristic that saturation flow become steam since pressure reduces and the volume enlarges. Here, decreasing the erode and rusty.
- 3、Throttling surface, sealing surface are separated, and surface of the plug and throttling parts are hardened up to HRC70. So the valve can provide longer service life and tighter shutoff performance.
- 4、There are the big nicks on the surface of the plug. Even through there is 2 or 3 mm solid grain like weld dregs, the plug will not be choked and its action is flexible.
- 5、Designing the structure of integral type body, namely no bonnet, aim at removing the leakage between body and bonnet.
- 6、The great mass of spares are in common use of the spray water control valve, so have good exchangeability.

本体部 BODY

阀体型式 Body type	锻造角型、“Z”型 Forging angle type, "Z" type
公称通径 Body size	DN25、DN32、DN40、DN50(1"、1 1/4"、1 1/2"、2")
阀体材质 Body & Bonnet Material	20# 锻钢 20# forging carbon
阀芯形状 Plug form	防空化串级式节流阀芯 Anti-cavitation concatenation throttling plug
阀内件材质 Trim materials 阀内件处理 Trim treatment	9Cr18MoV 或不锈钢材料 9Cr18MoV or Stainless steel 渗氮处理 NT=Nitriding Treatment
公称压力 Body ratings	HG20592 PN25、32MPa; ANSI B16.5 ANSI1500、ANSI2500
连接方式 Body connections	焊接式 BW 或按用户要求 Welded ends BW or according to the requirance of the user
上阀盖形式 Bonnet type	标准型 Standard type: ≤420℃
填料 Packing	石墨加因科镍丝编织填料 Graphite Inco nickel weave packing
表面涂层 Painting color	阀体喷银色环氧树脂 Argentate munsell on carbon steel

执行机构 ACTUATOR

规格 Specification	形式 Type	电动式 Electric Motor type
		SIPOS 5 Flash
用途 Purpose		开关 on-off
供气压力或供给电压 Air supply or Power supply		供电电源:380V 50Hz Power supply 输入信号:4~20mA Input signal
接口 Connection		进出线口:M25X1.5(2个) Conduit entry
正作用 Direct action		输入信号增加阀闭 Signal increase to valve shut
反作用 Reverse action		输入信号增加阀开 Signal increase to valve open
滞后 Hysteresis		≤0.8%
线性 Linearity		≤±1%
允许环境温度 Ambient Temp		-20℃~+60℃
标准涂层色 Painting		中国蓝 China blue
选购设备 Option		限位开关 Limit switch

性能 PERFORMANCE

额定 Kv 值及行程 Rated Kv and stroke	请参见表 1 See Table 1
流量特性 Flow characteristics	抛物线特性 Parabolic characteristic
可调比 R Rangeability	30:1
阀座泄漏量 Seat leakage	符合 ANSI B16.104-1976 IV 级 According to ANSI B16.104-1976 Class IV
允许压差 Allowable pressure drops	25MPa

表 1.Kv 值和行程

Fig.1 Kv and stroke

公称通径 DN(mm) Rated Size	25	32	40	50
公称压力 PN (MPa) Body Ratings	ANSI1500、2500 或(or)PN25、32MPa			
Kv 值 Rated Kv	6.5	8.5	12.8	16
额定(mm)Stroke	20		25	

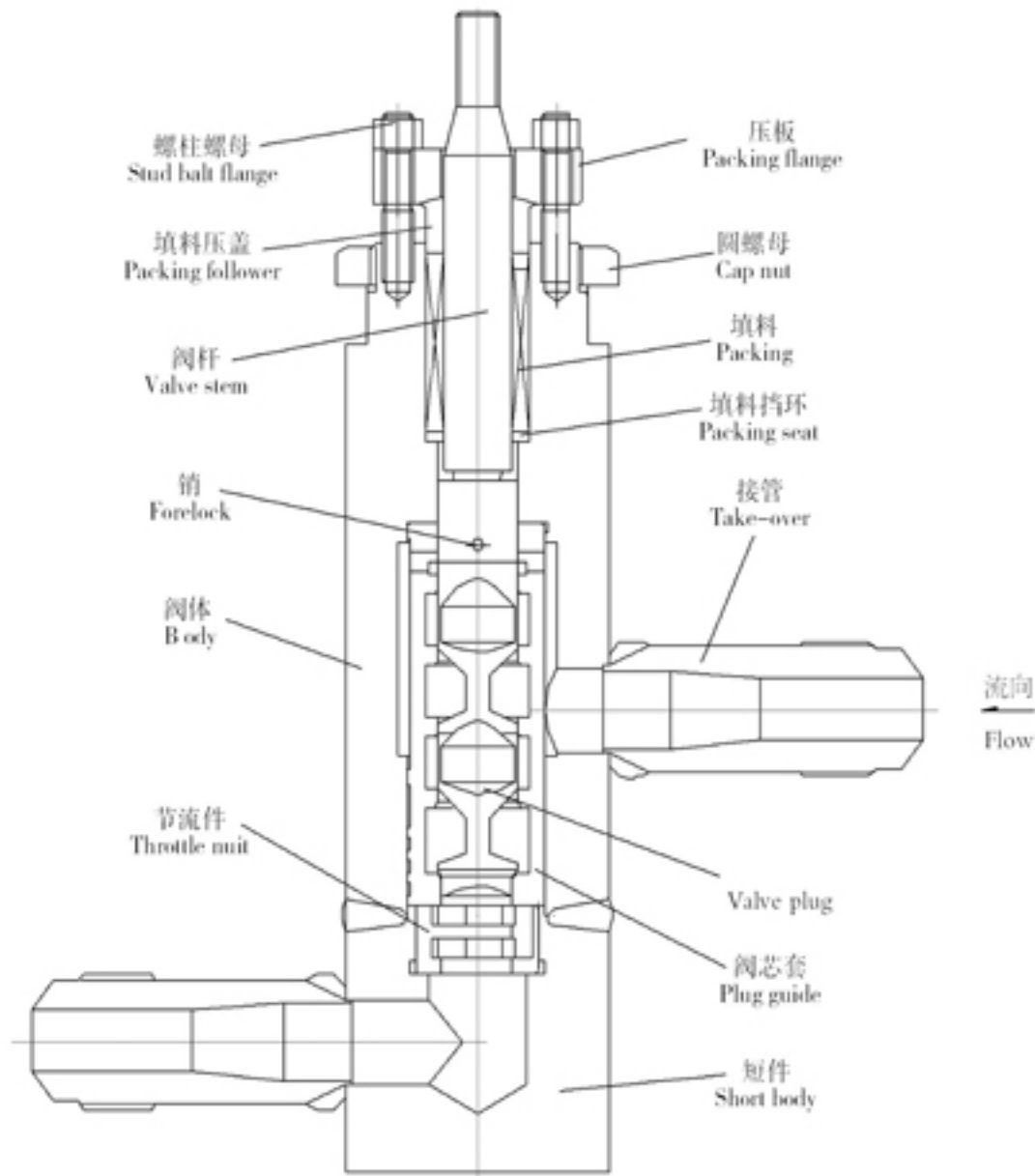
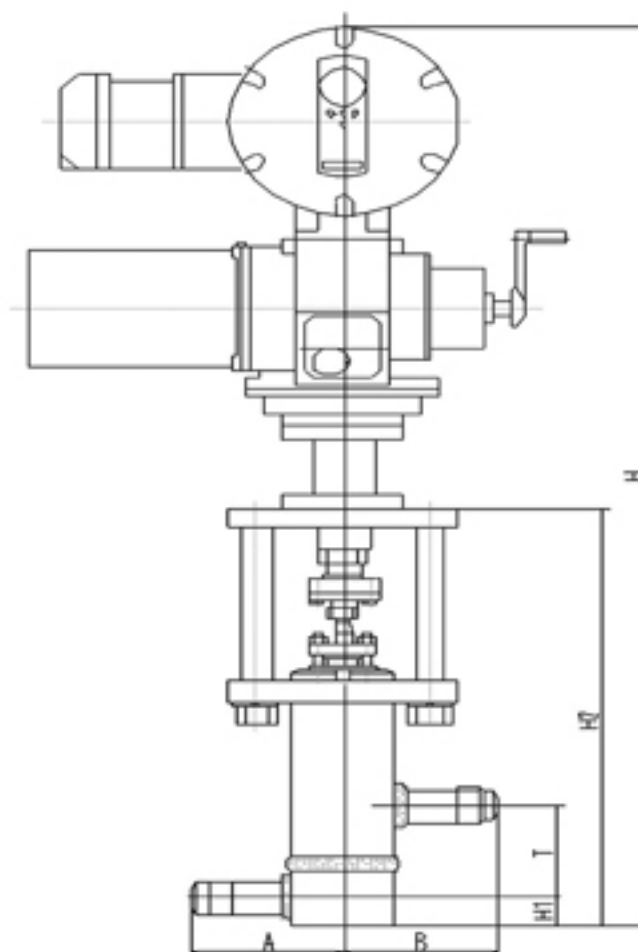
图 1.本体部构造 Fig.1 BODY SECTION VIEW

图 2.配 SIPOS 5 Flash 电动执行机构外形图
Fig.2 Outline with SIPOS 5 Flash electric motor


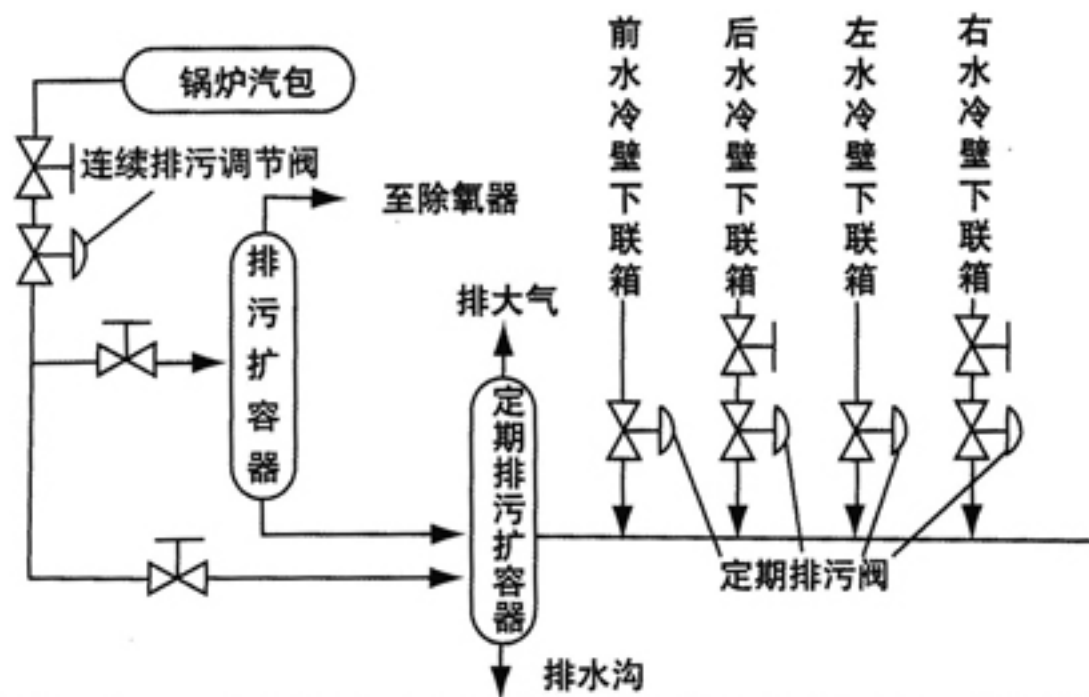
表 2. 配 SIPOS 5 Flash 电动执行机构外形尺寸 (单位:mm)

Table 2. Outline size with SIPOS 5 Flash electric motor (UNIT:mm)

公称通径 (mm) Body Size	公称压力 (MPa) Body Ratings	电动执行机构 Electric motor SIPOS 5 Flash	A	T	H1	H2	H	A1	A2
DN25	PN32MPa PN25MPa	LE50.1	336	128	37	616	1378	325	235
DN32			355	135	40	631	1393		
DN40		LE70.1	372	178	70	768	1557	325	235
DN50		LE100.1	418	150	70	811	1813	400	335

图 3. 锅炉连续排污调节阀在电站锅炉系统的位置

Fig.3 HTK control valve in the position of the power boiler system.

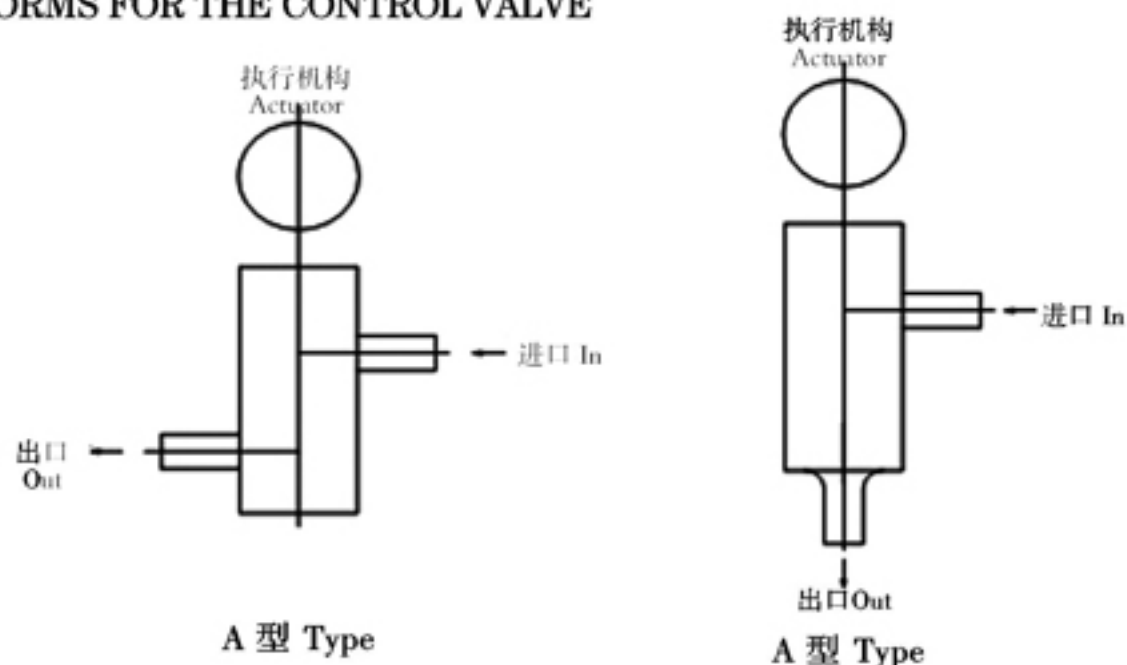


注：1、连续排污调节阀： $\Delta P = \text{汽包压力} - \text{除氧器压力}$ 或等于汽包压力，流量一般为锅炉蒸发量的1~1.5%。
2、直流锅炉及临界压力的锅炉无上述系统的调节阀。

Remarks: 1、Continuous blowdown control valve: the pressure of steam package minus the pressure of deaerator or the pressure of steam package is equal to ΔP . The flow is generally percent 1 ~ 1.5 of boiler evaporation.
2、There is no the control valve in direct current boiler and critical pressure boiler.

图 4. 调节阀安装位置

Fig. 4. MOUNTING FORMS FOR THE CONTROL VALVE



VER.WY-0901-T-HTK

50年控制阀制造经验
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宁夏吴忠仪表公司
Ningxia Wuzhong Instrument Co., LTD.
地址：宁夏吴忠市朝阳街67号 邮编：751100
Tel:0953-3929024 Fax:3929014
[http:// www.wzyb.com.cn](http://www.wzyb.com.cn)