



ZJY46H减压阀
ZJY46H Pressure reducing valves



ZJLSQ滤水器
ZJLSQ Water purifier



ZJK46H水力控制阀
ZJK46H Hydraulic Control Valves



ZJA46H泄压阀
ZJA46H Safety relief valve



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ERA-ZHONGJI



ZJY46H组合式减压阀

ZJY46H Combined type pressure reducing valves

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公司简介

湖南湘潭中基电站辅机制造有限公司是一家集研发、制造于一体的高科技企业。自公司组建以来致力于水电行业产品的研发，先后研发了ZJ系列产品，广泛用于电厂、泵站技术供水系统。其中ZJY46H减压稳压阀获得原国家电力工业部技术进步奖，产品相继在构皮滩、紫坪铺、宝珠寺、天生桥、二滩、小浪底等国内外电站、泵站投入运行。最高水头370m，最大供水5000m³/h，均为一级减压。因产品质量稳定、使用寿命长、维护方便等特点颇受用户青睐，更因其独特的技术而填补了国内空白。

1998年公司与中南勘测设计院合作承担了三峡电站大口径减压阀的科研攻关，1:1模型在宝珠寺电站运行，2000年通过三峡电站组织专家验收，给予产品高度评价，目前产品运行稳定。

由于公司重视科研投入，2002年又有多个产品获得了国家专利，产品技术得到了不断升级改进，逐步形成了完全拥有自主知识产权的系列产品（包括ZJY46H系列减压阀等），产品质量完全达到和超出国际先进水平，在天生桥、紫坪铺、构皮滩等电站完全替代了进口产品。同年公司率先在同行取得ISO9001:2000质量认证体系；2007年为利用优势平台，公司将营销中心迁往北京，组建“北京时代中基科技发展有限公司”；2009年，产品在北京通过了专家评审鉴定，与会专家一致认为：北京时代中基科技发展有限公司和湘潭中基电站辅机制造发展有限公司联合研制开发的“ZJY46H型射流泵导阀控制全活塞式减压稳压控制阀”技术成熟，已达到国际先进水平。

公司现有员工82人，其中，中高级技术人员32人。公司宗旨是“用一流的设备装备水电，用一流的技术服务水电”。公司为了更好地满足产品发展需要，走向世界，欢迎广大新老客户垂询！欢迎用户到电站现场实地考察产品质量和使用情况！



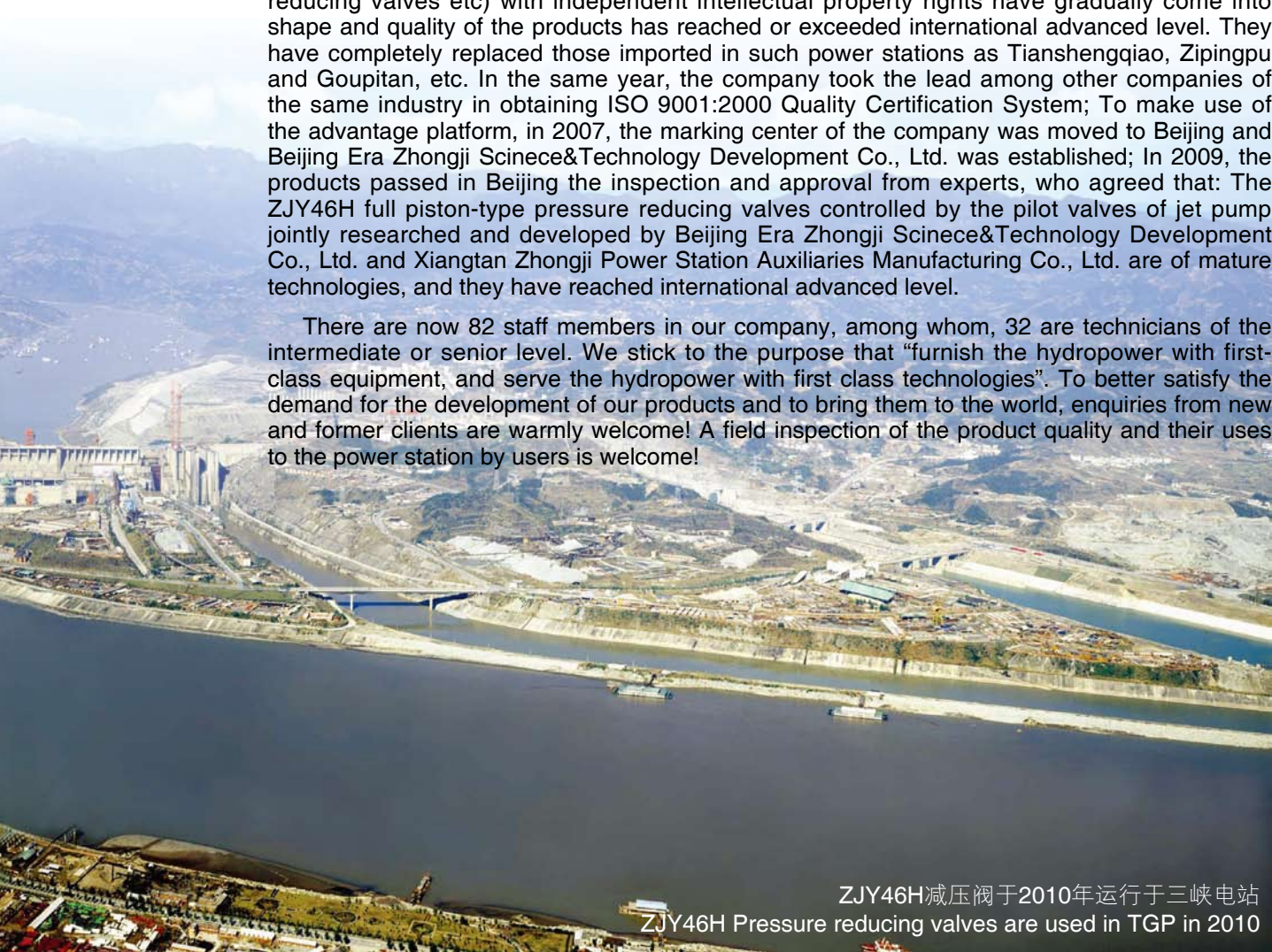
Company Profile

As a high-tech privately owned company, Xiangtan Zhongji Power Station Auxiliaries Manufacturing Co., Ltd. integrates research, development and manufacture as a whole. Since the establishment of the company, it has been dedicated to the research and development of products in the hydropower industry. The ZJ series products developed by the company have been widely used for water supply systems in power plants and pump stations. Among them, ZJY46H pressure reducing valves have been awarded the technology progress award by the former Ministry of Power Industry. Such products have been put into operation in domestic and international power stations and pump stations such as Goupitan, Zipingpu, Baozhusi, Tianshengqiao, Ertan, Xiaolangdi, etc. Characterized by the highest head of 370 meters, the maximum water supply of 5000m³/h, and Single stage pressure release, they are quite popular with users due to stable quality, long service life and convenient maintenance. The unique technologies of the products have filled up the domestic blank.

In 1998, our company cooperated with HYOROCHINA ZHONGNAN ENGINEERING CORPORATION and undertook the scientific research into pressure reducing valves of large diameter for Three Gorge Power Station. Models in a scale of 1:1 were put into operation in Baozhu Temple Power Station. In 2000, the Three Gorges Power Station organized experts to carry out acceptance inspection on them and they were highly thought of by the experts. Currently, the products are in stable operation.

The company has been paying special attention to the investment in scientific research, so in 2002, several more products have won patents of China, and technologies of the products have been continuously upgrading and improved. A series of products (including ZJY46H pressure reducing valves etc) with independent intellectual property rights have gradually come into shape and quality of the products has reached or exceeded international advanced level. They have completely replaced those imported in such power stations as Tianshengqiao, Zipingpu and Goupitan, etc. In the same year, the company took the lead among other companies of the same industry in obtaining ISO 9001:2000 Quality Certification System; To make use of the advantage platform, in 2007, the marking center of the company was moved to Beijing and Beijing Era Zhongji Science&Technology Development Co., Ltd. was established; In 2009, the products passed in Beijing the inspection and approval from experts, who agreed that: The ZJY46H full piston-type pressure reducing valves controlled by the pilot valves of jet pump jointly researched and developed by Beijing Era Zhongji Science&Technology Development Co., Ltd. and Xiangtan Zhongji Power Station Auxiliaries Manufacturing Co., Ltd. are of mature technologies, and they have reached international advanced level.

There are now 82 staff members in our company, among whom, 32 are technicians of the intermediate or senior level. We stick to the purpose that "furnish the hydropower with first-class equipment, and serve the hydropower with first class technologies". To better satisfy the demand for the development of our products and to bring them to the world, enquiries from new and former clients are warmly welcome! A field inspection of the product quality and their uses to the power station by users is welcome!



ZJY46H减压阀于2010年运行于三峡电站

ZJY46H Pressure reducing valves are used in TGP in 2010



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ZJY46H组合式减压阀

ZJY46H combined type pressure reducing valves

ZJY46H型组合式减压阀是湘潭中基电站辅机制造有限公司最新的第七系列专利技术产品，相比同类产品，ZJY46H型减压阀以高减压比、大流量、进口压力适应能力强、低噪声、使用寿命长等优点倍受用户的好评。广泛应用于国内外各水电站和泵站，如：李家峡、宝珠寺、天生桥、小浪底、构皮滩等。

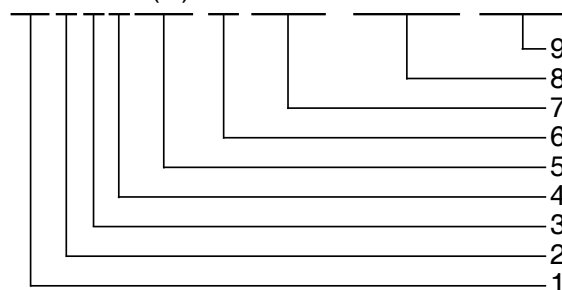
ZJY46H combined type pressure reducing valves are the latest 7th series of products with patent technologies manufactured by Xiangtan Zhongji Power Station Auxiliaries Manufacturing Co., Ltd. Compared with similar products, ZJY46H pressure reducing valves are highly thought of by users because of their high ratio of reduced pressure, large flow, strong adaptability to inlet pressure, low noise and long service life, etc. They are widely used in domestic and international power plants and pump stations, such as Lijiaxia, Baozhusi, Tianshengqiao, Xiaolangdi, Goupitan, etc.

规格型号

Specification and Model

- 1 — 湘潭中基电站辅机制造有限公司产品代码
- 2 — 减压、稳压、稳流活塞式调节阀
- 3 — 法兰连接
- 4 — 组合式
- 5 — 阀座、节流锥密封材质
(H: 不锈钢, 硬密封; X: 橡胶, 软密封)
- 6 — 公称压力 (bar, 16/25/40/64)
- 7 — 阀体材料 (Q: 球墨铸铁 C: 铸钢 P: 不锈钢)
- 8 — 功能代号
①: 单反馈、可反冲排污型
②: 双反馈、可反冲排污型
③: 单反馈、可反冲排污、内锁定保护型
④: 双反馈、可反冲排污、内锁定保护型
- 9 — 自动型号 (Q1自动排污 Q2自动排污, 远程监控)

Z J Y 4 6 H(X)-bar-Q/C/P-(①②③④)-Q1/Q2



- 1 — Product codes of Xiangtan Zhongji Power Station Auxiliaries Manufacturing Co., Ltd .
- 2 — Pressure release, pressure stabilization and current stabilization piston-type control valves
- 3 — Flange coupling
- 4 — Combined type
- 5 — Sealing material for valve seat and throttling cone(H: stainless steel, Metallic seal; X: flexible barrier material seal)
- 6 — Nominal pressure(bar, 16/25/40/64)
- 7 — Valve body material (Q: ductile iron C: cast steel P: stainless steel)
- 8 — Function codes:
① : Single feedback and back-flushable pollution discharge type
② : Dual feedback and back-flushable pollution discharge type
③ : Single feedback, back-flushable pollution discharge and internal lock protection type
④ : Dual feedback, back-flushable pollution discharge and internal lock protection type
- 9 — Automatic models(Q1 automatic dirt discharge. Q2 automatic dirt discharge with remote monitoring and control.)

ZJY46H型减压阀结构形式

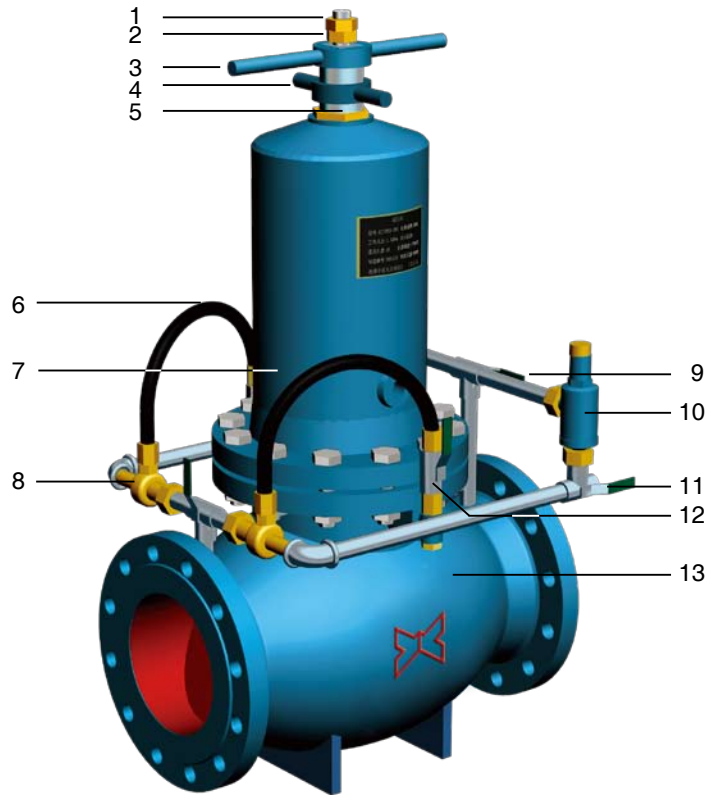
Type of construction

ZJY46H型减压阀的外形结构

如右图所示，ZJY46H活塞式减压阀是由主阀和反馈系统组成。图中所示为功能代号④的产品：双反馈、可反冲排污、内锁定保护型。

外形结构：

- 1 — 安全拉杆
- 2 — 安全锁定螺母
- 3 — 调节扳杆
- 4 — 起吊螺母
- 5 — 锁紧螺母
- 6 — 压力导管
- 7 — 阀盖
- 8 — 射流泵
- 9 — 三通转换阀
- 10 — 控制阀
- 11 — 排污阀(排放水中杂质，自动排污型为电磁阀)
- 12 — 出口压力锁定阀
- 13 — 阀体



Outline structure of ZJY46H pressure reducing valves

As shown in the Figure on the right, the ZJY46H piston-type pressure reducing valves are comprised of the main valve and a feedback system. The product shown in the Figure is product ④: the dual feedback, back-flushable pollution discharge, and internal locking protection type.

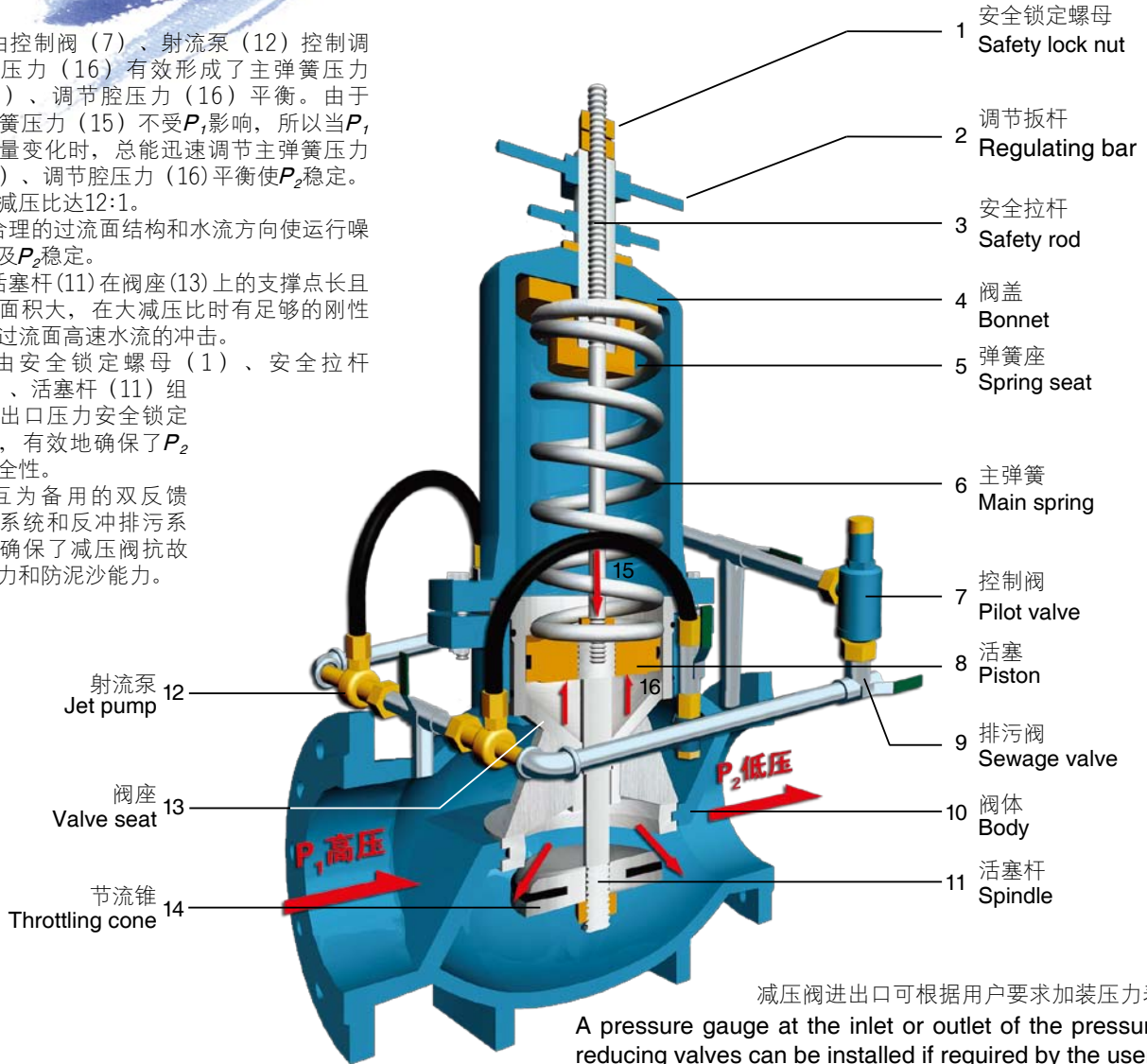
Outline structure:

- 1 — Safety rod
- 2 — Safety lock nut
- 3 — Regulating bar
- 4 — Lifting nut
- 5 — Lock nut
- 6 — Pressure pipe
- 7 — Bonnet
- 8 — Jet pump
- 9 — Three-way control valve
- 10 — Pilot valve
- 11 — Sewage valve (To drain the impurities in water, and the automatic drainage type is called the solenoid valve.)
- 12 — Outlet pressure lock valve
- 13 — Body

ZJY46H型减压阀内部构造及技术特点

Internal structure and technical characteristic of ZJY46H pressure reducing valves

- A、由控制阀（7）、射流泵（12）控制调节腔压力（16）有效形成了主弹簧压力（15）、调节腔压力（16）平衡。由于主弹簧压力（15）不受 P_1 影响，所以当 P_1 和流量变化时，总能迅速调节主弹簧压力（15）、调节腔压力（16）平衡使 P_2 稳定。而且减压比达12:1。
- B、合理的过流面结构和水流方向使运行噪声低及 P_2 稳定。
- C、活塞杆（11）在阀座（13）上的支撑点长且支撑面积大，在大减压比时有足够的刚性承受过流面高速水流的冲击。
- D、由安全锁定螺母（1）、安全拉杆（3）、活塞杆（11）组成的出口压力安全锁定系统，有效地确保了 P_2 的安全性。
- E、互为备用的双反馈控制系统和反冲排污系统，确保了减压阀抗故障能力和防泥沙能力。



减压阀进出口可根据用户要求加装压力表

A pressure gauge at the inlet or outlet of the pressure reducing valves can be installed if required by the user.

- A. The balance between pressure of the main spring (15) and pressure of regulation chamber is effectively formed by the pressure of regulation chamber (16) controlled by the pilot valve (7) and the jet pump (12). The pressure of the main spring (15) shall not be affected by P_1 , so when there P_1 and the flow varies, the pressure of the main spring (15) and the pressure of the regulation chamber (16) are always rapidly regulated to be balanced to make P_2 stable. Besides, the ratio of the reduced pressure shall reach 12:1.
- B. The reasonable over-flow surface structure and the water flow direction shall make low operation noise and stable P_2 .

- C. The Spindle (11) is of long supporting point and large supporting area on the valve seat (13), it shall be of enough rigidity to bear the impact of the high-speed water flow on the over-flow surface at large ratio of reduced pressure.
- D. The safety locking system of outlet pressure consisting of the safety lock nut (1), safety bar (3), Spindle (11) effectively ensure the safety of P_2 .
- E. The dual-feedback control system and the system of pollution discharge by backwashing, which is the backup of each other, ensure the anti-fault capacity and the anti-sediment capacity of the pressure reducing valves.

ZJY46H型减压阀参数

Parameters of ZJY46H pressure reducing valves

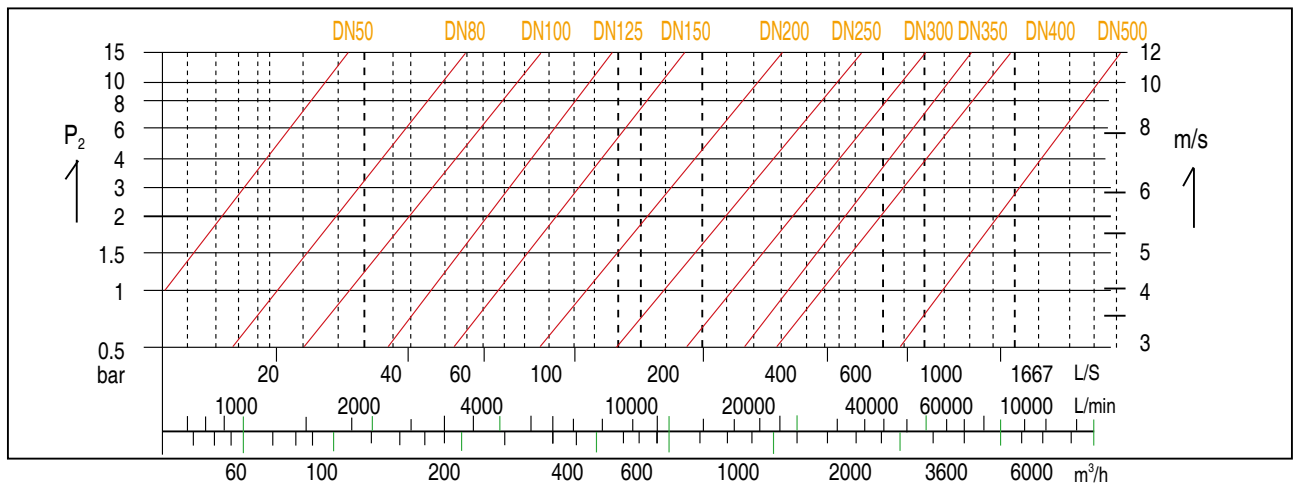
型号 Model	公称通径 DN(mm)	公称压力 Nominal pressure (MPa)	强度试验压力 Strength testing pressure(MPa)	最大进口压力 Maximum inlet pressure(MPa)	出口压力调节范围 Regulating range of outlet pressure (MPa)		
					0.08~0.2	0.2~0.5	0.5~1.2
ZJY46H-16Q/C/P	50~250	1.6	2.4	1.6	0.08~0.2	0.2~0.5	0.5~1.2
	300~500				0.08~0.2	0.2~0.5	0.5~1.0
ZJY46H-25Q/C/P	50~250	2.5	3.75	2.5		0.2~0.5	0.5~1.2
	300~500					0.2~0.5	0.5~1.0
ZJY46H-40C/P	50~250	4.0	6.0	4.0		0.2~0.5	0.5~1.2
	300~500					0.2~0.5	0.5~1.0

注：其它特殊压力等级产品也可另订

Special pressure classes can also custom-made

流量（如下表）

Flow (shown as the following table)

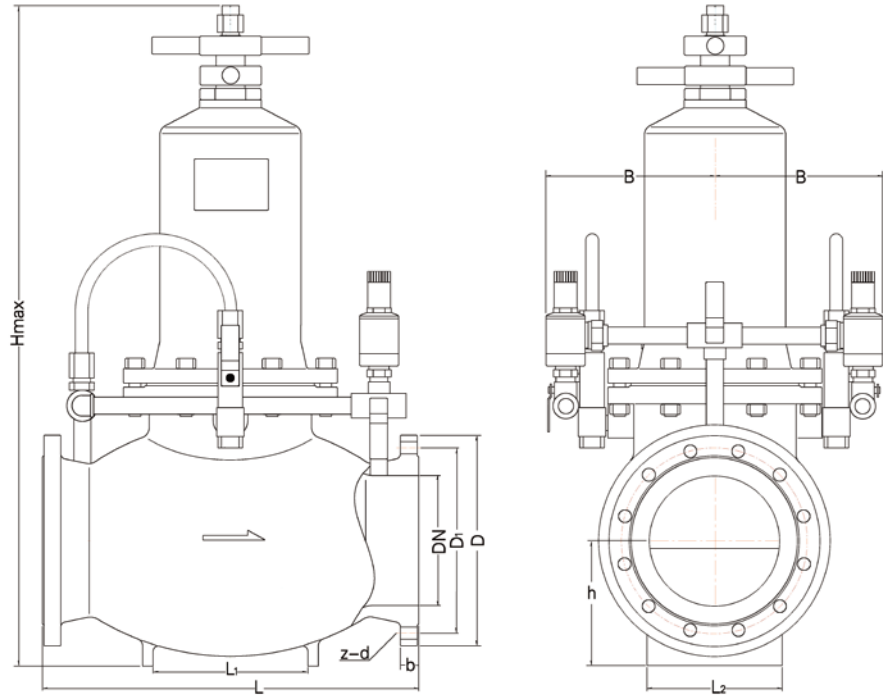


主要零件材质

Materials of main parts

序号 No.	1	2	3	4	5
名称 Name	阀体 Body	阀座 Valve seat	阀瓣 Disc	阀杆 Valve stem	阀盖 Bonnet
材质 Material	Q/C/P	1Cr18Ni9Ti	不锈钢 Stainless steel	不锈钢 Stainless steel	Q/C/P
序号 No.	6	7	8	9	10
名称 Name	弹簧 Spring	调节螺杆 Adjusting screwstem	控制阀 Pilot valve	射流泵 Jet pump	活塞 Piston
材质 Material	50CrV	不锈钢 Stainless steel	不锈钢组合件 Stainless steel assembly	铜合金 Copper alloy	铝青铜 Albronze

ZJY46H型减压阀结构尺寸
Structural sizes of ZJY46H pressure reducing valve



500	715	650	20-Φ33	44	730	660	20-Φ36	48	755	670	20-Φ42	57	1100	410	430	2010	600×600
400	580	525	16-Φ30	32	620	550	16-Φ36	40	660	585	16-Φ39	50	1100	390	360	1940	500×500
350	520	470	16-Φ26	30	555	490	16-Φ33	38	580	510	16-Φ36	46	980	350	312	1715	400×400
300	460	410	12-Φ26	28	485	430	16-Φ30	34	515	450	16-Φ33	42	850	320	290	1700	400×370
250	405	355	12-Φ26	26	425	370	12-Φ30	32	450	385	12-Φ33	38	730	320	242	1480	340×270
200	340	295	12-Φ22	24	360	310	12-Φ26	30	375	320	12-Φ30	34	600	320	195	1300	260×250
150	285	240	8-Φ22	24	300	250	8-Φ26	28	300	250	8-Φ26	28	480	270	160	1090	190×190
125	250	210	8-Φ18	22	270	220	8-Φ26	26	270	220	8-Φ26	26	400	270	142	819	150×180
100	220	180	8-Φ18	22	235	190	8-Φ22	24	235	190	8-Φ22	24	350	270	120	764	130×140
80	200	160	8-Φ18	20	200	160	8-Φ18	24	200	160	8-Φ18	24	310	250	105	620	120×130
50	165	125	4-Φ18	20	165	125	4-Φ18	20	165	125	4-Φ18	20	290	250	92	550	100×120
DN	D	D ₁	Z-d	b	D	D ₁	Z-d	b	D	D ₁	Z-d	b	L	B	H1	Hmax	L1 × L2
	ZJY46H—16C 型				ZJY46H—25C 型				ZJY46H—40C 型								

法兰连接尺寸、形式符合GB/T9113.1-2000（凸面）GB/T9113.2-2000（凹凸面）的规定。

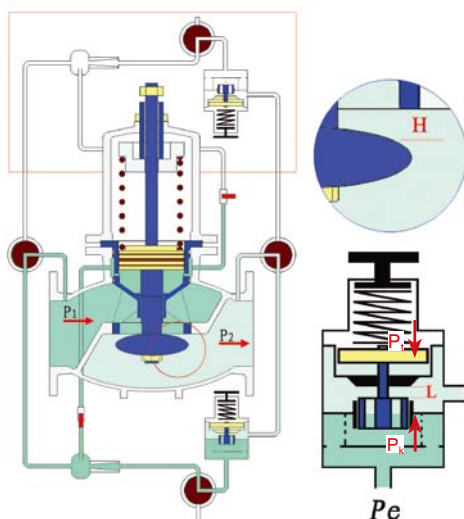
The dimension and form of the flange connection are in accordance with GB/T9113.1-2000(RF) & GB/T9113.2-2000(MFM).

ZJY46H型减压阀工作原理

Working principle of ZJY46H pressure reducing valves

减压阀自动调节工作原理

如图一所示：当 P_1 变化时减压阀的出口首先表现为 $P_2 \pm \Delta P_2$ 通过反馈系统出口管传到控制阀，使 $P_t = P_k \pm \Delta P_2$ ；从而 L 发生相应变化，导致 $\pm \Delta P_e$ 的变化，经压力导管导致 P_k 的相应变化， P_t 与 P_k 达到新的平衡，主阀的过流面积 H 相应变化。因此， P_1 变化，而通过 H 的流量不变。 P_2 始终是原整定的低压值。当流量变化时，减压阀自我调节工作原理也如同上。



图一 Figure 1

Working principle of automatic regulation of pressure reducing valves

As shown in Figure 1: when P_1 varies, at the outlet of the pressure reducing valves, $P_2 \pm \Delta P_2$ shall be transferred to the control valve through the outlet pipe of the feedback system to make $P_t = P_k \pm \Delta P_2$; And then L shall have a correspondent change, thus causing a variation of $\pm \Delta P_e$, and P_k shall have a correspondent change through the pressure pipe, and with P_t and P_k , reaching a new balance, the over-flow area H of the main valve shall have a correspondent change.

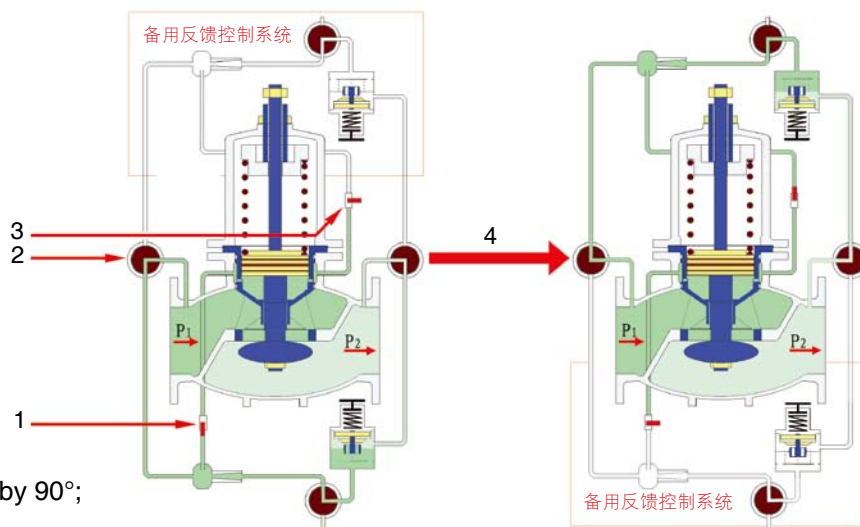
Therefore, when P_1 varies, the flow volume through H shall not vary. P_2 is always the formerly adjusted low-pressure value. When the flow volume varies, the self-regulating working principle of the pressure reducing valves is the same as the above.

双反馈系统切换工作原理

如图二所示：
1、关闭球阀；
2、旋转两个三通阀 90° ；
3、打开球阀；
4、切换完成。

Working principle for the switch-over of the dual feedback system

As shown in Figure 2:
1. Close the ball valve;
2. Rotate the two three-way valves by 90° ;
3. Open the ball valve;
4. The switch-over is completed.



图二 Figure 2

ZJY46H型减压阀工作原理

Working principle of ZJY46H pressure reducing valves

反冲排污工作原理



如图三所示:

减压阀的反冲排污装置能有效地防止反馈控制系统的堵塞,使减压阀在多泥沙的水质中保持良好的工况。

工作原理:

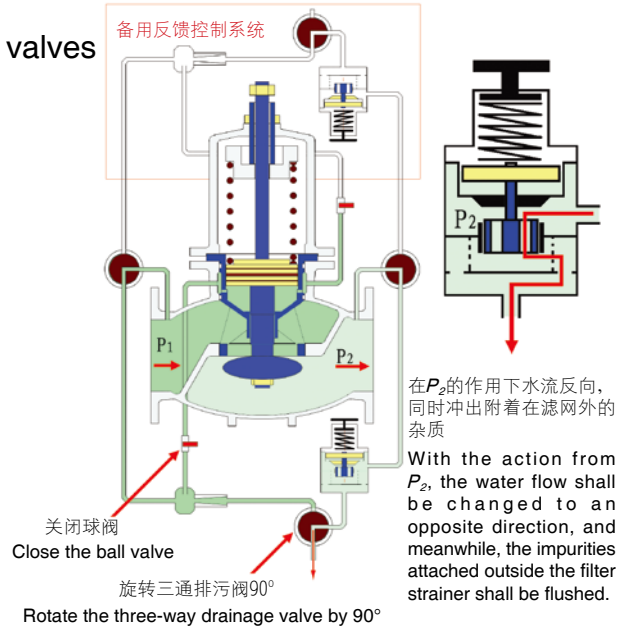
- 1、关闭球阀, 由于水的不可压缩性, P_2 仍是低压;
- 2、旋转三通排污阀 90° , 顺向水流切断, 在 P_2 的作用下水流反向, 同时冲出附着在滤网外的杂质;
- 3、关闭三通排污阀, 打开球阀, 反冲排污完成。

Working principle of the system of pollution discharge by backwashing:

As shown in Figure 3: the system of pollution discharge by backwashing of the pressure reducing valves can effectively prevent a stuck feedback control system to keep the pressure reducing valves in a good working condition in water with much sediment.

Working principle:

1. Close the ball valve. With the incompressibility of water, P_2 is still under low pressure;
2. Rotate the three-way drainage valve by 90° , and shut it off towards the direction of the water flow. With the action from P_2 , the water flow shall be changed to an opposite direction, and meanwhile, the impurities attached outside the filter strainer shall be flushed;
3. Close the three-way sewage valve, and open the ball valve to complete the process of pollution discharge by backwashing.



图三 Figure 3

内锁定工作原理



如图四所示: 出口压力内锁定装置是为防止反馈系统遭受意外损坏后, 在主活塞下方失压时, 保持 P_2 值安全的刚性保护装置。

当 P_2 调节完成, 如1所示保留适当的间隙 h 。

当主活塞下方万一失压时, h 消失, 自动保护, 如2所示。

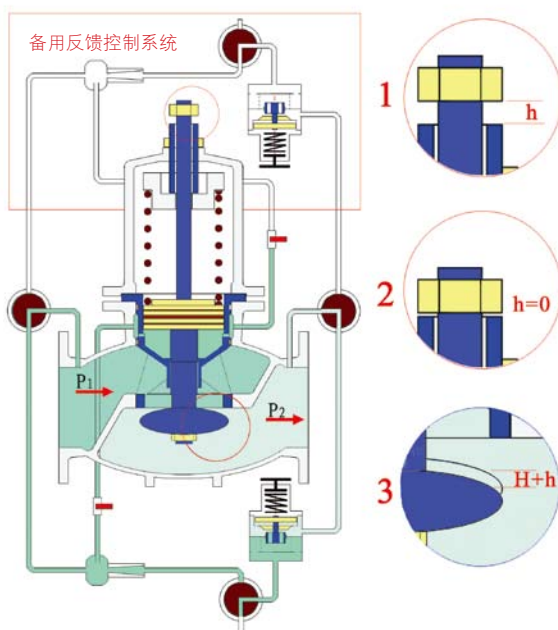
此时主节流锥的开度最大为: $H+h$, 如3所示。

因此, P_2 值不会形成危害性的高压。

Working principle of internal lock

As shown in Figure 4: the internal lock device of outlet pressure is to protect the rigid protection device which keeps P_2 be a safty value when there is pressure loss under the main piston after the feedback system suffers accidental loss.

When the regulation of P_2 is completed, a suitable space h shall be reserved as shown in 1. When there is an accident of pressure loss under the main piston, h shall disappear, and automatic protection shall occur as shown in 2. The maximum openness of the throttle cone of the main valve is: $H+h$, as shown in 3. Therefore, a dangerous high-pressure shall not be formed in the P_2 value.



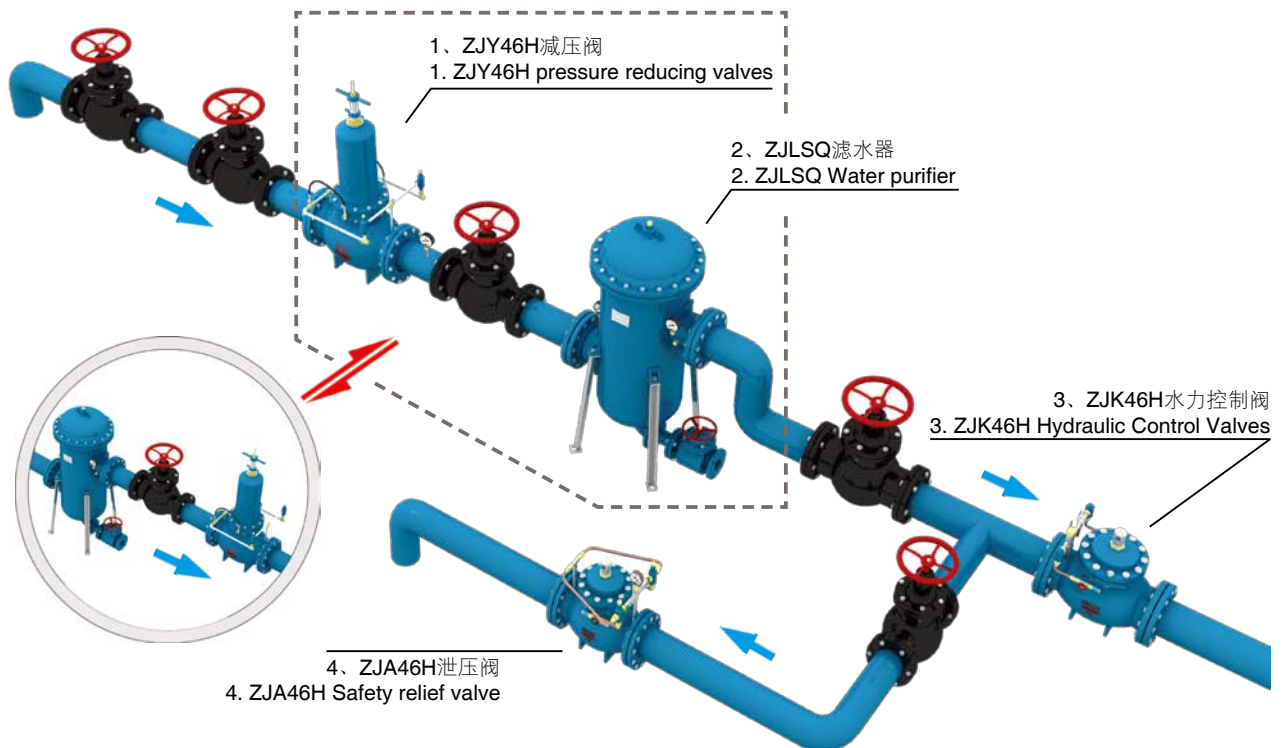
图四 Figure 4

典型安装示意图

Typical Installation Instruction

这是一个典型的技术供水系统。如图所示：经过ZJY46H减压阀减压后的流体通过ZJLSQ滤水器过滤后，再通过ZJK46H水力控制阀进入各个用水点。如果管道超压，ZJA46H泄压阀会充分打开并及时泄压。

- 1、ZJY46H减压阀的双反馈系统均可反冲排污，其特有的安全锁定系统可以确保在系统遭受严重损坏时出口端压力仍保持低压。
- 2、ZJLSQ滤水器具有大流量小流阻的技术特点。如果安装在ZJY46H减压阀之后，用户可以选择较小压力级别的滤水器，并可配合ZJY46H减压阀设置自动反冲排污。
- 3、ZJK46H水力控制阀可以选择自动或手动模式，通过快速开启和缓慢关闭达到消除管道水锤压力的目的。在开启和关闭的同时进行反冲排污，确保工况时不被卡阻。
- 4、ZJA46H活塞式泄压阀能准确地保持安全的压力，一旦超压泄压阀会充分打开并及时泄压。ZJA46H活塞式泄压阀除了具有双反馈系统外，另带有强制开启手柄，在万一的故障时可切换反馈系统或直接手动排放。



This is a typical water supply system applied in technology. Shown as the Figure: The fluid decompressed by ZJY46H Pressure reducing valve is filtered by ZJLSQ Water purifier, then enter into every water point through ZJK46H hydraulic control valve. Once the pipe exceeds the pressure, ZJA safety relief valve shall open fully and relieve the pressure immediately.

1. The dual feedback system in ZJY46H Pressure reducing valve can all discharge pollution by backwashing, and its own internal locking system ensures the outlet pressure to remain in low pressure when the system occurs serious damage.
2. ZJLSQ Water purifier with the technology merits such as large flow and small flow resistance. Installed after ZJY46H Pressure reducing valve, the water purifier with lesser pressure grade may be chosen by the users and cooperates with ZJY46H Pressure reducing valve to discharge pollution automatically by backwashing.
3. For ZJK46H Water control valve, automatic mode or manual mode can be adopted. It can eliminate the pressure of water hammer through quick turn on and slow turn off. Meanwhile, it can discharge pollution by backwashing to avoid obstructing in working condition.
4. For ZJA46H Safety relief valve with piston, it can precisely keep the safe and stable pressure. Once the pipe exceeds the pressure, the ZJA46H Safety relief valve can fully open and decompress in time. Except for owning the dual feedback system, ZJA46H safety relief valve with piston is equipped with a forcible handle. When it occurs failure, switching the dual feedback system or direct manual operation would be done.

客户群体
Client base




项目名称 Jname	项目所在地 Project Site	项目名称 Jname	项目所在地 Project Site	项目名称 Jname	项目所在地 Project Site	项目名称 Jname	项目所在地 Project Site
冒烟洞一级	云南	铜头	四川	洪源	浙江	李家峡	青海
冒烟洞二级	云南	南雅河	四川	石潭	浙江	神牛	青海
螺丝湾	云南	小牛颈	四川	东溪	浙江	三星	青海
歹马	云南	马桑坪	四川	小舜江	浙江	乌鲁瓦提	新疆
麻栗坡	云南	宝珠寺	四川	安村	江西	下板地	新疆
南令河三级	云南	紫坪铺	四川	井冈冲	江西	雅玛渡	新疆
对门河	云南	二道桥	四川	明珠一级	江西	羊湖	西藏
大梁子	云南	太平驿	四川	明珠二级	江西	沃卡	西藏
猴爬岩	云南	二滩	四川	罗湾	江西	金淌水	陕西
那追	云南	小木岭	四川	大坳	江西	引松入长	吉林
玉龙	云南	紧水滩	浙江	南二	福建	杂木寺	甘肃
油坊沟	云南	文成	浙江	沿江	福建	大广坝	海南
老虎山	云南	金溪	浙江	园坪	福建	小浪底	河南
六合电站	云南	珊溪	浙江	安仁溪	福建	三峡	湖北
计堵河二级	云南	均溪一级	浙江	三明	福建	VACA	Belize
西洱河一级	云南	东溪一级	浙江	雷公口	福建	Whologner	Uzbekistan
岗曲河	云南	乌溪江	浙江	江榭	湖南	Hakent	Uzbekistan
天生桥一级	贵州	枫树岭	浙江	资水河	湖南	Dak Pone	Vietnam
天生桥二级	贵州	铜山	浙江	东江	湖南	DAK MI	Vietnam
赤水河	贵州	林家坞	浙江	高塘	广东	Kirirom	Kampuchea
构皮滩	贵州	新安江	浙江	长调	广东	Djiploho	EquatorialGuinea
小关子	四川	三叉溪	浙江	花山	广东		

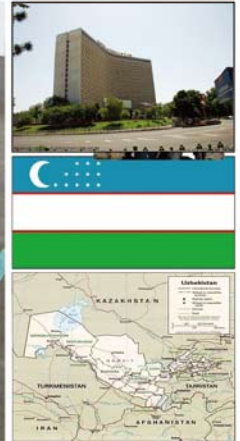
部分统计数据 Fraction of client

部分案例
Some cases



 乌鲁格纳尔和哈肯特泵站
(乌兹别克斯坦)


- 用于水泵电机用泵轴冷却水
- 水头: 230m
- 主要减压设备:
ZJY46H-40C DN80
- 运行起始时间: 2009 (一级减压)



Whologner & Hakent Pump Station (Uzbekistan)

- Cooling water for the pump shaft of the pump motors
- Water head : 230m
- Main pressure release equipment: ZJY46H-40Q DN80
- Starting time of the operation: 2009(the single stage pressure release)



瓦卡水电站 (伯利兹) 

- 总装机容量: 7.8MW×2
- 主机自流减压技术供水。
- 水头: 68m-88m
- 主要减压设备:
ZJY46H-16C DN150
- 运行起始时间: 2009 (一级减压)

VACA Hydropower Station (Belize)

- Total installed capacity: 7.8MW×2
- Water supply by gravity with pressure reducing technology
- Water head : 68m-88m
- Main pressure release equipment :
ZJY46H-16C DN150
- Starting time of the operation: 2009 (the single stage pressure release)

部分案例 Some cases

大鹏水电站（越南）

- 总装机容量：70MW
- 消防供水
- 水头：230m-280m
- 主要减压设备：ZJY46H-40C DN50
- 运行起始时间：2009（一级减压）

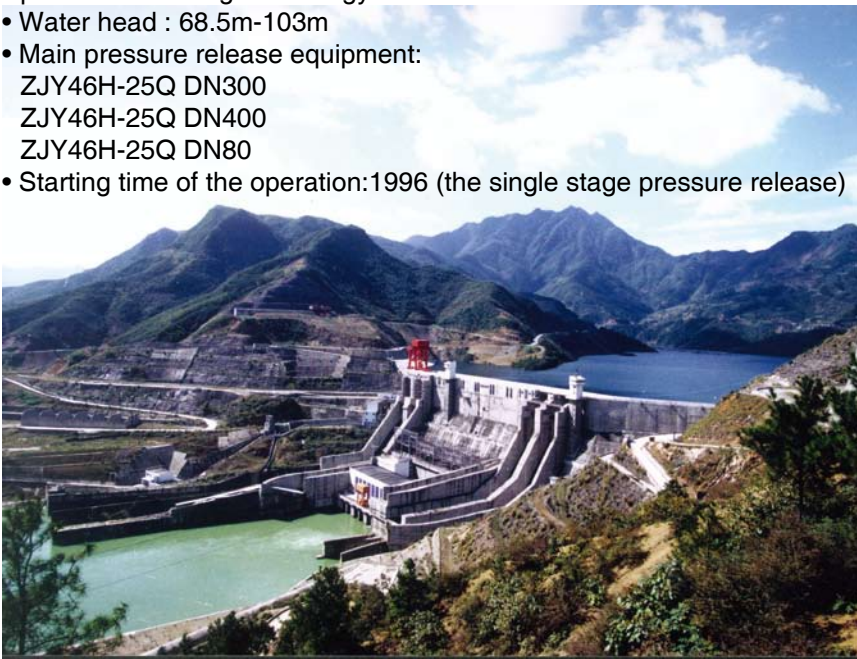
Dak Pone Hydropower Station (Vietnam)

- Total installed capacity : 70MW
- Firefighting water
- Water head : 230m-280m
- Main pressure release equipment : ZJY46H-40C DN50
- Starting time of the operation: 2009(the single stage pressure release)



Baozhusi Hydraulic Power Plant (Sichuan, China)

- Total installed capacity : 175MW×4
- Transformer cooling water system, Water supply by gravity with pressure reducing technology
- Water head : 68.5m-103m
- Main pressure release equipment:
ZJY46H-25Q DN300
ZJY46H-25Q DN400
ZJY46H-25Q DN80
- Starting time of the operation:1996 (the single stage pressure release)




宝珠寺水力发电厂（中国四川）

- 总装机容量：175MW×4
- 主变压器冷却用水、主机自流减压技术供水
- 水头：68.5m-103m
- 主要减压设备：
ZJY46H-25Q DN300
ZJY46H-25Q DN400
ZJY46H-25Q DN80
- 运行起始时间：1996（一级减压）

部分案例


Some cases

天生桥一级水电站（中国贵州）

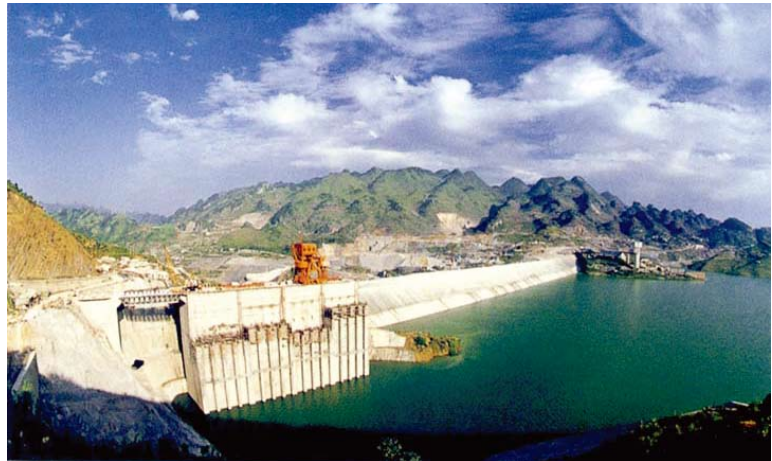
- 总装机容量：300MW×4
- 主机自流减压技术供水；消防用水；生活用水
- 水头：178m-220m
- 主要减压设备：
ZJY46H-16Q DN400
- 运行起始时间：2005（一级减压）
ZJY46H-16Q DN200
- 运行起始时间：1998（一级减压）

Tianshengqiao First-cascade Hydropower Station
(Guizhou, China)

- Total installed capacity : 300MW×4
- Water supply by gravity with pressure reducing technology;
Firefighting water; Domestic water
- Water head:178m-220m
- Main pressure release equipment : ZJY46H-16Q DN400
- Starting time of the operation :2005(the single stage pressure release)
ZJY46H-16Q DN200
- Starting time of the operation:1998 (the single stage pressure release)

 天生桥二级水电站（中国贵州）

- 总装机容量：220MW×6
- 主机自流减压技术供水；消防用水；生活用水
- 水头：178m-220m
- 主要减压设备：
ZJY46H-25Q DN300
ZJY46H-25Q DN250
ZJY46H-25Q DN200
ZJY46H-25Q DN150
ZJY46H-25Q DN100
- 运行起始时间：1996（一级减压）

Tianshengqiao Second-cascade Hydropower Station
(Guizhou, China)

- Total installed capacity : 220MW×6
- Water supply by gravity with pressure reducing technology;
Firefighting water; Domestic water
- Water head:178m-220m
- Main pressure release equipment :
ZJY46H-25Q DN300 ZJY46H-25Q DN250 ZJY46H-25Q DN200
ZJY46H-25Q DN150 ZJY46H-25Q DN100
- Starting time of the operation :1996(the single stage pressure release)



部分案例
Some cases



紫坪铺水电站（中国四川）

- 总装机容量：190MW×4
- 主机自流减压技术供水
- 水头：68m-132.76m
- 主要减压设备：
ZJY46H-16C DN350
- 运行起始时间：2008（一级减压）



Zipingpu Hydropower Station (Sichuan, China)

- Total installed capacity : 190MW×4
- Water supply by gravity with pressure reducing technology
- Water head : 68m-132.76m
- Main pressure release equipment: ZJY46H-16C DN350
- Starting time of the operation :2008(the single stage pressure release)

典型应用案例

Typical application cases



构皮滩水电站（中国贵州）

- 总装机容量：600MW×5
- 主机自流减压技术供水
 - 水头：160m-200m
- 主要减压设备：ZJY46H-40C DN500
- 运行起始时间：2010(一级减压)



Goupitan Hydropower Station (Guizhou, China)

- Total installed capacity :600MW×5
- Water supply by gravity with pressure reducing technology
 - Water head:160m-200m
- Main pressure release equipment :
ZJY46H-40C DN500
- Starting time of the operation:2010 (the single stage pressure release)



原国外某品牌采用的二级减压技术供水系统

The former water supply system with the application of technologies in the two-stage pressure release program by a certain foreign manufacturer

ZJY46H减压阀一级自流减压方案替代国外某厂家的二级自流减压方案

The replacement of the single stage pressure release program of ZJY46H pressure reducing valves with the two-stage pressure release program of a certain foreign manufacturer



典型应用案例

Typical application cases



ZJY46H减压阀在构皮滩电站的应用
The application of ZJY46H pressure reducing valves in Goupitan Power Station



构皮滩电站工作人员在我生产基地进行产品验收试验
Staff from Goupitan Power Station is carrying out inspection acceptance of products at our manufacture base

中国贵州构皮滩电站于2009年发电，其技术供水系统采用国外某品牌膜片式减压阀二级减压自流供水方案。

在经过一年的运行后，因为该减压阀无法适用该电站工况而发生故障，造成机组停机事故。

经过技术方案的详细对比论证，2010年由ZJY46H活塞式减压阀的一级减压自流供水方案替代了国外某品牌膜片式减压阀的二级减压自流供水方案。






构皮滩电站工作人员在我生产基地进行产品验收
Staff from Goupitan Power Station is carrying out product acceptance at our manufacture base

Goupitan Hydropower Station(Guizhou), China began to produce electricity in 2009, and its water supply system applied the technology of the two-stage pressure release self-flowing water supply program of diaphragm pressure reducing valves of a certain foreign brand.

After a year's operation, the units were stopped because of failures from pressure reducing valves of the type resulting from their inability to adapt to the operation condition of the power station.

After careful contrastive demonstration of the technical programs, in 2001, the single stage pressure release self-flowing water supply program of the ZJY46H piston-type pressure reducing valves replaced the two-stage pressure release self-flowing water supply program of diaphragm pressure reducing valves of a certain foreign brand.

检验报告
Inspectionreport

ZNL-425.2.1-2007
总页数 共 02 页

2009180791A (新) 质量认证028号 CNAS L3839

检 验 报 告

No: S09125 W061


产品名称: 射流泵导阀控制全活塞式减压稳压控制阀

型 号: ZJY46H-16C DN350

生产单位: 湘潭中基电站辅机制造有限公司

委托单位: 北京时代中基科技发展有限公司
湘潭中基电站辅机制造有限公司

检验类别: 委托检验



检验单位: 湖南省水力机械质量监督检验授权站
监制单位: 湖南省质量技术监督局

ZNL-425.2.3-2007

湖南省水力机械质量监督检验授权站

检 验 报 告

No: S09125 W061 共 2 页第 1 页

产品名称	射流泵导阀控制全活塞式减压稳压控制阀		商标	ZJ
规格型号	ZJY46H-16C DN350	批号	090906	
委托单位	北京时代中基科技发展有限公司 湘潭中基电站辅机制造有限公司	联系电话	0731-58289061	
生产单位	湘潭中基电站辅机制造有限公司	联系电话	0731-58289061	
抽样人员	/	抽样单编号	/	
抽样日期	/	生产日期	2009.09	收样日期 2009.09.10
样品数量	01	抽样基数	/	验收人员 杨波
样品等级	合格品	封样状态	裸机	检验日期 2009.09.17
任务来源	企业委托			
主要检验仪器设备	LM-100 涡轮流量变送器、TD1000 型智能流量变送器、YB150 0~1.0MPa 精密压力表、YB150 0~2.5MPa 精密压力表			
检验依据	1、GB/T12244-2006 《减压阀 一般要求》 2、GB/T12245-2006 《减压阀 性能试验方法》			
检验结论	来样委托检验项目符合标准要求。 签发日期: 2009年09月18日			
备注	批准:  审核:  主检: 			

检验报告
Inspection report

ZNL-425.2.4-2007

检测结果

№: S09125 W061 共 2 页 第 2 页

判别依据: GB/T12244—2006 GB/T12245—2006

检测项目	要 求	结 果		单 项 结 论		备 注
		样 I	样 II	样 I	样 II	
1 壳体试验	向阀门壳体充入试验介质,逐步加压到 1.5 倍阀门冷水工作压力,维持 60 秒无渗漏	加压至 2.4MPa,维持 120 秒,壳体无渗漏		√		(随机抽样)
2 密封性试验	出口压力表升值,弹性密封应为零	进口 1.6MPa,出口保持 0.55MPa 180 秒无升值;进口 1.6MPa,出口保持 0.22MPa 180 秒无升值		√		
3 调压试验	给定的调压范围内,出口压力应能在最大值与最小值之间连续调整,不得有卡阻与异常振动	出口压力在 0.2-0.5MPa 间连续调整 3 次,无卡阻和异常振动		√		
4 压力特性偏差 ΔP_p	进口压力变化时,减压阀不得有异常振动,其出口压力负偏差值不大于出口压力的 5%	进口 0.8MPa,出口压力最大负偏差 2.5%;进口 1.68MPa,出口压力偏差为 0%		√		
5 流量特性偏差 $\Delta P_{p(Q)}$	出口流量变化时,减压阀不得有异常振动,其出口压力负偏差值不大于出口压力的 10%	进口压力 0.8MPa,出口压力最大负偏差 3.1%;进口 1.68MPa,出口压力偏差为 0%		√		
6 标志	阀体上应有:公称压力、公称尺寸、流向和商标	阀体标有:公称压力 16、公称尺寸 350、流向箭头和商标 ZJ		√		
7 铭牌	铭牌上应有:进口压力范围、出口压力范围、制造厂名、型号规格和出厂日期。	符合要求		√		

公司荣誉
Glories

新产品新技术鉴定验收证书

鉴字[2009]22号

产品(技术)名称: ZJY46H射流泵导阀控制全活塞式减压稳压控制阀

完成单位: 北京时代中基科技发展有限公司
湘潭中基电站辅机制造有限公司

鉴定类别: 新产品

鉴定方式: 会议鉴定

鉴定组织单位: 北京市经济和信息化委员会

鉴定专家委员会意见: 北京时代中基科技发展有限公司和湘潭中基电站辅机制造有限公司联合研制开发的“ZJY46H型射流泵导阀控制全活塞式减压稳压控制阀”技术达到国际先进水平, 同意通过新产品鉴定。

鉴定日期: 2009年9月22日

国际经济贸易委员会



技术交流
Technical exchange



技术总监与客户反复研讨设计方案
Repeated discussion on the design program by the technical director with clients



在国家水电技术研讨推介会上发表讲话
Speaking at the national introduction seminar of hydropower technologies



技术人员对供水设计方案进行攻关论证
Technicians carrying out tackling demonstration on the design program for water supply



湖南省技术监督局的工作人员在做流量特性实验
Experiment on flow characteristics by staff from Bureau of Technical Supervision of Hunan Province



减压阀电站应用专家座谈会
Expert meeting for conversation on the application of pressure reducing valve in power station

时代中基 一流的水电制造专家