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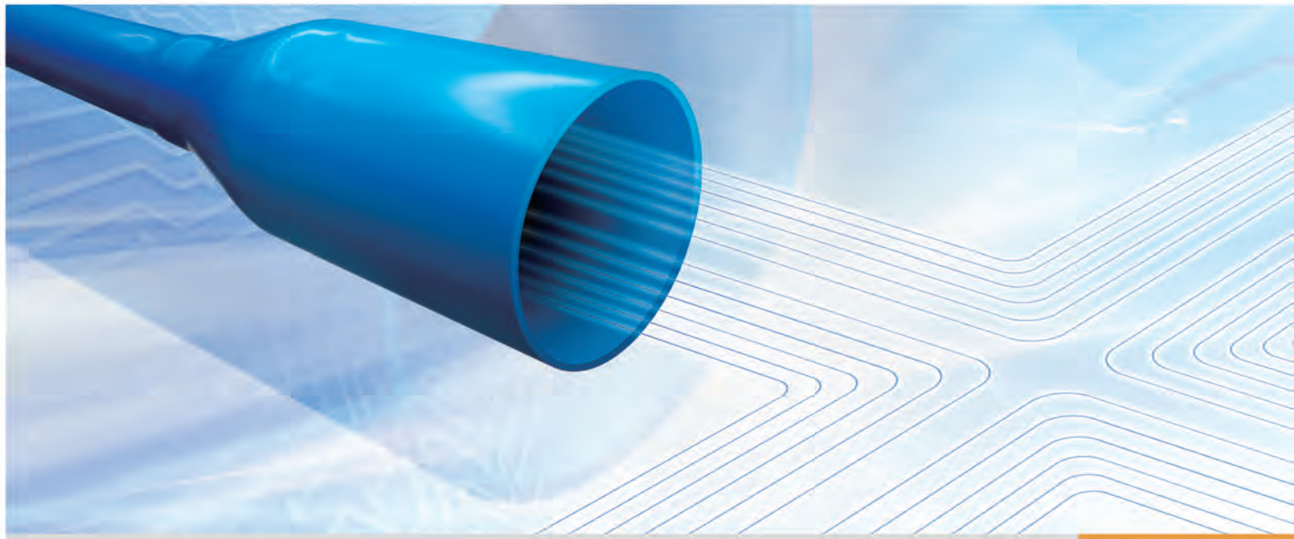
BAOSU 宝塑管业

MAKING PIPES WITH OUR HONESTY　用 / 心 / 做 / 管　诚 / 实 / 做 / 人



给水用高抗冲耐压分子双轴取向
太极蓝管道系统

2022年07月第一版

公司简介：

河北建投宝塑管业有限公司(以下简称宝塑管业)是由原宝硕管材核心员工在河北建设投资集团和保定发展投资公司大力支持下创建与发展、专业化生产新型高端塑料管材和塑机装备的国家高新技术企业。

作为ISO9001,ISO14001和ISO45000认证的国家高新技术企业、国家科技型中小企业和国家专精特新“小巨人”企业。2016年，宝塑管业®以其卓越的创新能力被中国轻工业联合会评为中国塑料管材行业十强企业。

宝塑管业®分为输水管道事业部、智能装备制造事业部、油气与热力管道事业部，主要服务于供水输水、农业灌溉、太极蓝®PVC-O管道装备制造、油气输送、城镇供暖等领域。

宝塑管业®核心团队拥有数十年在塑料管道领域研究开发、生产运营、技术服务的经验，是具备持续创新能力的优秀团队，先后获得过三十多项具有自主知识产权的国家专利，主持或参与制修订了二十多项国家及行业标准。

宝塑管业®将本着“用心做管，诚实做人”的企业理念，坚持“科学发展，创新驱动”，以助力中国塑料管道行业健康发展为己任，努力工作，用心做好管，助行业做好管，让客户用好管，为建设人类美好生活和更加绿色的世界，做出自己的贡献。

Brief Introduction:

Hebei Construction & Investment Baosu Pipe Industry Co., Ltd (Baosu®) is a national high-tech enterprise established by the core staff of former Baoshuo Pipe, supported by Hebei Construction and Investment Group and Baoding Development Investment Co., Ltd, and specializing in the production of new high-end pipes and plastic machine equipment.

As a national high-tech enterprise certified by ISO9001, ISO14001 and ISO45000, a national scientific and technological small and medium-sized enterprise and a national specialized and new "little giant" enterprise. In 2016, Baosu® was rated as one of the Top Ten Enterprises in China's Plastic Pipe Industry by China National Light Industry Council with its outstanding innovation ability.

Baosu® was divided into Water Pipe Division,Intelligent Equipment Manufacturing Division and Oil Gas and Heating Pip e Division,mainly serves in the fields of water supply and conveyance,agricultural irrigation,TaijiBluePVC-O pipe equipment manufacturing,oil and gas transmission and urban heating etc.

The core team of Baosu® has decades of experience in research and development, production operation and technical services in the field of plastic pipes. They are an excellent team with continuous innovation capability, who had won more than 30 national patents with independent intellectual property rights, and hosted or participated in more than 20 national and industry standards.

Baosu® will adhere to the corporate philosophy of “Making Pipes with Our Honesty”, “Developing Scientifically, Driven by Innovation”,taking leading the development of China's plastic pipe industry as our own responsibility, "Concentrate on manufacturing high-quality pipes, Help the industry manufacture high-quality pipes, Let customersuse correctly high-quality pipes", and work hard to make our contribution for a greener world.

30年制管历程

2022年，为巴西大型塑料生产企业科尔塑料管业公司提供太极蓝® PVC-O装备技术，使中国高端塑料加工装备技术走向了世界。

2019年，为中国大型上市企业成功提供了太极蓝® PVC-O成套装备技术，为助力中国塑料管道行业健康发展做出了贡献，也为太极蓝®PVC-O装备技术走向世界奠定了坚实基础。

2014年，宝塑管业® 团队积数十年之研发功力，开发出塑料压力管材领域转型升级、环保节能的革命性新兴产品——(PVC-O)太极蓝®管及太极蓝®PVC-O装备技术。

2012年，成功研发HW-PO全塑保温管。

2011年，成功研发HT-PO修复用耐高温塑料管道，无砂铺设、非开挖铺设专用RC-PO管道。

2009年，“给水用PVC-M管材项目”获得住房与城乡建设部“华夏科学技术奖”。

2006年，消化和吸收国外技术，成功研发PVC-M管道，为中国塑料管道行业带来了生机和活力。

2001年，承接中国援外塑料管道项目——“援南项目”，圆满完成了国家交给的任务。

1999年，两次引进德国KraussMaffei公司管材生产线，其中KMD-114和KMD-130，代表了20世纪末高水平的塑料挤出设备。

1993年，应用复合材料技术，研制成功“给水用玻璃钢增强PVC-U复合管件”，改写了在大口径塑料管道系统中仅使用钢制或铸铁管件的历史。

1986年，引进德国KraussMaffei公司管材生产线，生产出710mm大口径压力给水PVC-U管材。

30 Years History of Making Plastic Pipes

In 2022, Baosu® provides the major plastic manufacturer in Brazil, Corr Plastik Industrial Limited, with the TaijiBlue® PVC-O Tech and Equipment, bringing China's high-end plastic process technology and equipment to the world.

In 2019, successfully provided TaijiBlue® PVC-O complete equipment technology to a large-scale listed enterprise in China, which contribute to the development of the plastic pipe industry in China and lay a solid foundation for TaijiBlue® PVC-O equipment technology entering the international market.

In 2014, launched a new generation plastic pipe-TaijiBlue® pipe: Oriented Unplasticized Polyvinyl Chloride (PVC-O) for the conveyance of water under pressure.

In 2012, developed HW-PO plastic insulated pipe for residential heating and hot water supply system.

In 2011, developed high temperature resistant polyolefin alloy (HT-PO) liner pipes for oil and gas application, and PE 100-RC three layers pipes for no sands and trenchless technology.

In 2009, "Water supply PVC-M pipe project"was awarded"China Science and Technology Award"by the Ministry of Housing and Urban-Rural Development.

In 2006, we successfully developed PVC-M pipes in China, which bring achievement to China's plastic pipe industry.

In 2001, completed the biggest plastic pipes construction project of China government supported the developing world——Aid South Africa project.

Imported pipe production line twice from KraussMaffei in 1999, among which KMD-114 and KMD-130 represented the high level of plastic extrusion equipment at the end of the 20th century.

In 1993, researched and developed water supply fiber reinforced PVC-U compound fittings, which changed only steel or cast iron fittings in large diameter plastic piping systems.

In 1986, the German KraussMaffei pipe production line was introduced to produce 710mm Large-diameter Water Supply PVC-U Pipe Under Pressure.

TAIJIBLUE

供给侧结构改革的典范——太极蓝®管

China Supply-side Structural Reforms Model--TaijiBlue®Pipes

太极是古老而充满智慧的中国哲学概念。《易经•系辞传》云：“易有太极，是生两仪；两仪生四象，四象生八卦；八卦定吉凶，吉凶生大业”。中国人相信，太极是万物之源，太极代表着阴阳和谐，代表着刚与柔的完美统一。

太极蓝®管将管材的高强度与高韧性集于一身，这与太极智慧不谋而合，故命名为太极蓝®管。

太极蓝®管是利用具有先进水平的生产设备，采用优质原材料，在特殊的工艺条件下，经双向拉伸而使分子链的排列结构发生了质的变化的一种新型管材。

太极蓝®管与传统管材相比具有高强度、高韧性、高抗冲、抗疲劳、耐开裂、耐低温的优异性能。比传统塑料管材节省一半以上的材料，管道安装成本、运行成本、维护成本显著降低，是塑料管道行业的一次革命。被誉为供给侧结构改革的典范。

Taiji is an ancient and smart Chinese philosophy. Chinese believe that Taiji is the origin of all lives on Earth. Taiji represents the harmonious state of balance between yin and yang, hardness and softness. The unique properties combining strength and toughness of TaijiBlue®PVC-O Pipe are similar to Chinese Taiji.

TaijiBlue®PVC-O Pipe is manufactured by special biaxially oriented process using advanced equipments. Through the axial and hoop orientation, the molecules chain is arranged in order to form laminated structure.

TaijiBlue®PVC-O Pipes compare with traditional plastic pipe and save at least 50% material. Installing costs, operating costs and maintenance costs are significantly reduced.It is China Supply-side Structural Reforms model.

取向原理

Orientation Principle

拉伸取向：是指材料在一定温度及外力作用下，分子从无序排列向有序排列的过程。高分子分子链由于实现了有序排列，材料沿分子取向方向的强度和韧性大大增加。

Molecules become ordered arrangement from random arrangement by stretching orientation process in a certain temperature and external forces.Among the orentation of the molecule, the strength and toughness of the material are greatly increased due to polymer chain realize the ordered arrangement.

1、碳原子的不同排列，造就了石墨和金刚石的不同性能。

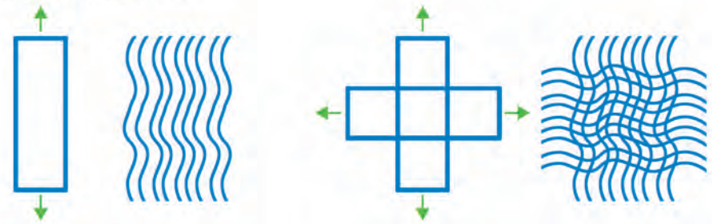
The different arrangement of carbon atoms, createssoft graphite and stiff diamond.

2、棉纤维的不同排列，使柔软无力的棉花变成强韧的棉线和棉纱。

The different arrangement of cotton fibers, makes the limp cotton into strong cotton thread and cotton yarn.

3、PVC分子的不同排列，造就了PVC-O管材卓越的强度和韧性。

The compacted arrangement of PVC molecules makes the PVC-O pipes superior strength and toughness.



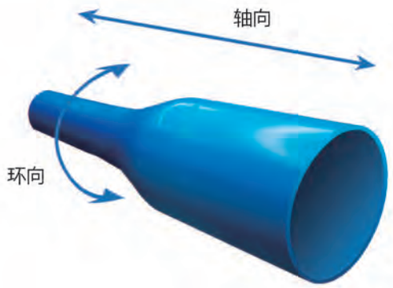
太极蓝®管取向机理

TaijiBlue® PVC-O Pipe Orientation Principle

太极蓝®管在加工中由于管材直径增大，使分子链在环向取向，很大程度上的提高了管材的环向强度，从而大大的增加了管材短期和长期液压爆破强度。

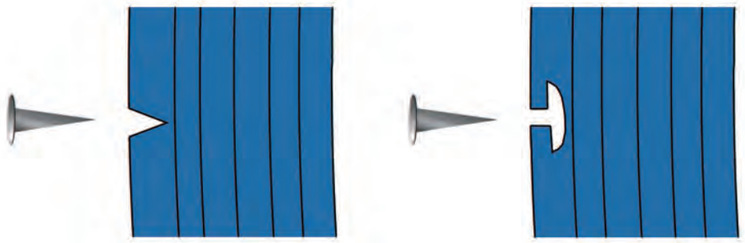
PVC-U pipe is oriented, hoop stiffness improved, hydraulic burst strength increased, and the material short and long hydraulic strength increased.

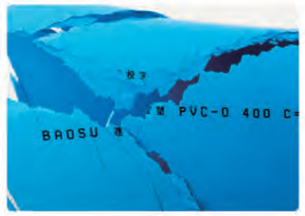
环向与轴向拉伸
Circumferential and axial



太极蓝®管在加工过程中由于管径增大，分子链双向取向形成了网状拉伸面和薄片分层结构，有效地阻止了裂纹扩展，从而很大程度上的提高了材料的韧性，也很大程度上的提高了材料抗冲击、抗外压、抗疲劳、耐低温的能力。

TaijiBlue® PVC–O Pipe formed net and laminated structure, effectively prevents the crack growth, and improves the toughness of the material. TaijiBlue® PVC–O Pipe is provided impact resistance, external pressure resistance, fatigue resistance, low temperature resistance.





分子取向加工产生薄片分层结构，是太极蓝®管韧度高的关键。如果由于缺陷和点负载（动、静）产生了裂纹，裂纹在各层通过时分层结构会阻碍裂纹在材料中通过，裂纹的前沿一再的分叉，在一个短距离内吸收了开裂扩展的能量，减少或消除了应力集中，裂纹扩展被有效地抑制。

TaijiBlue® PVC–O Pipe laminar structure is a key of the toughness improved. When pipe grows crack due to flaw in the material matrix or point loading, the laminar structures in the material of the pipe wall can effectively prevent crack through, reduce or eliminating the stress concentration, the crack growth is effectively suppressed .

太极蓝®管优异特性：
TaijiBlue® PVC–O Pipe Excellent Properties

- 高强度 材料强度高达传统管材2倍；
- 高韧性 抗冲强度比传统管材提高了5倍；
- 抗疲劳 管壁的网状层压结构有效阻止了裂纹扩展；
- 耐低温 零下25℃，吸收冲能的能力依然良好。

- Higher strength
  TaijiBlue® PVC–O Pipe strength 2 times compares with traditional pipes.
- Higher toughness
  TaijiBlue® PVC–O Pipe impact resistance 6 times compares with traditional pipes.
- Fatigue resistance
  Pipe wall net and laminated structure effectively prevent crack through.
- Cold temperature resistance
  Even in –25℃, TaijiBlue® PVC–O Pipe has excellent absorbing impact ability.

太极蓝®管的性能优势：

TaijiBlue® PVC–O Pipe Benefits

1、太极蓝®管长达百年的使用寿命

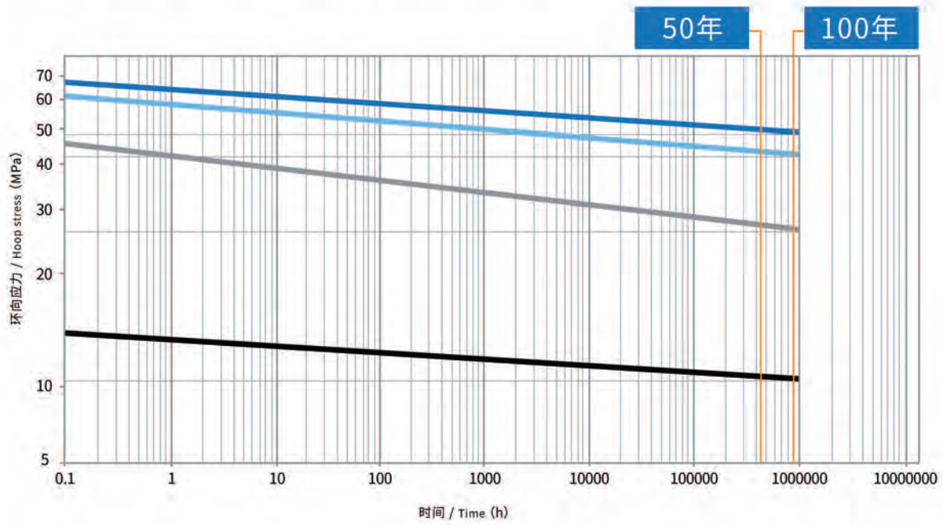
Over 100 years of TaijiBlue® PVC–O pipe service life

太极蓝®管具有卓越的抗疲劳和耐长期静液压性能，寿命可长达百年。

TaijiBlue® PVC–O Pipe service life is over 100 years and thanks to the excellent properties of the fatigue resistance and long term hydrostatic pressure.

长期静液压强度预测:

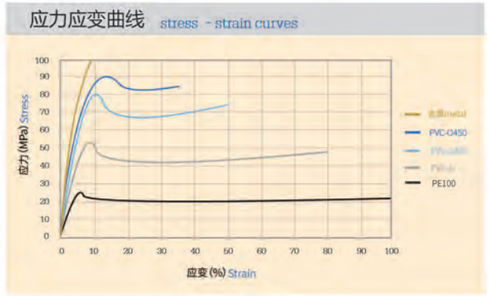
Long–term Hydrostatic Strength Predicted



PVC-O 450级管材长期静液压强度预测曲线	Long-term Hydrostatic Strength Predicted Curve of PVC-O 450 Pipe
PVC-O 400级管材长期静液压强度预测曲线	Long-term Hydrostatic Strength Predicted Curve of PVC-O 400 Pipe
PVC-U管材长期静液压强度预测曲线	Long-term Hydrostatic Strength Predicted Curve of PVC-U Pipe
PE100管材长期静液压强度预测曲线	Long-term Hydrostatic Strength Predicted Curve of PE 100 Pipe

2、太极蓝®管可以承受更高的工作压力

TaijiBlue® PVC–O pipe higher working pressure



太极蓝® 管在沿圆周方向（切向）拉伸时，其表现出的应力应变曲线类似金属材料，拉伸强度可达到未取向前的2倍。可以承受1.0、1.25、1.6、2.0、2.5MPa等更高等级的工作压力。

TaijiBlue® PVC–O Pipe along the circumferential direction (tangential) is oriented, the stress–strain curves of the material are closed to metal materials, and the tensile strength can be up to 2 times as much as before non–oriented. It can with–stand 1.0MPa, 1.25MPa, 1.6MPa, 2.0MPa, 2.5MPa working pressure.

3、太极蓝®管卓越的弹性

TaijiBlue® PVC–O pipe excellent elasticity

太极蓝 ® 管在直径方向上可以承受的变形达到管材内径的100%。当管材受到挤压后，管材可以迅速恢复原形，从而使得施工过程中因砂石或机械挤压而造成的破坏风险降至很低。同时，卓越的柔韧性使得太极蓝管极为适合于S形管线的铺设。

TaijiBlue® PVC–O Pipe can bear deformation of up to 100% of its internal diameter. The pipe immediately goes back to its original shape after being deformed. This means the potential breakages caused by stones crush or installing machines dash during installing are minimized.

4、太极蓝®管既强固、又坚韧、又抗脆性破坏，管道使用更安全。

TaijiBlue® PVC–O pipe stronger, more toughness, more failure resistance, and safer

太极蓝®管的层状结构，赋予了管材很强的抗冲击性能。管道在储运、安装、试水乃至运行过程中，由于砂石或机械等外物冲击碰撞而产生的应力经过每层时就会减弱，直至消失，从而很大程度上的减少了冲击所造成的破坏。

TaijiBlue® PVC–O Pipe special laminated structure enables stronger impact resistance. Stress from impact of stones and machines in transport, installing, pressure testing, and operation, can reduce and stop through laminated structures of the material, the breakages are minimized.

5、太极蓝®管良好的耐低温脆性，有益于低温铺设

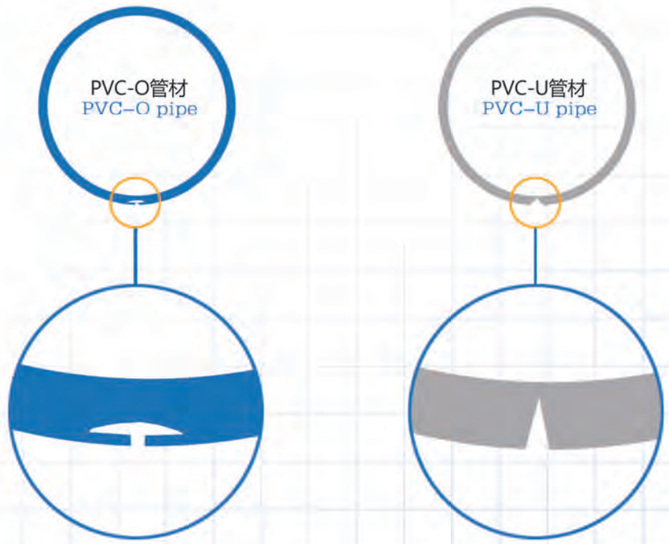
TaijiBlue® PVC–O pipe good cold brittle resistance

太极蓝®管即使在–25℃的寒冷环境下，仍然具有很好的吸收冲能的能力，从而扩大了太极蓝®管的使用地区，延长了管线施工的窗口期。

Even in the cold environment down to –25℃, TaijiBlue® PVC–O Pipe’s capacity to absorb impact does not present significant variations. This special features enlarge the service area and prolong the installation window.

6、太极蓝®管抗挠曲、抗点载荷、耐划痕，管网长期运行更安全。

TaijiBlue® PVC–O pipe flexure resistance, point load resistance, scratch resistance, long–term operation of the network more secure.



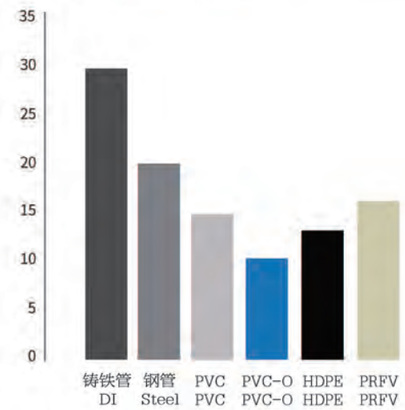
太极蓝® 管网层状的管壁结构可以有效阻止裂纹和划痕的延伸，因此外界对管材本体造成的破坏点或自有缺陷（如划伤）不会扩展，从而很大程度上的降低了管材慢速或快速开裂的风险，消除了管网运行的安全隐患，保证了管网的安全。

TaijiBlue® PVC–O Pipe net and laminated structure can prevent effectively the propagation of crack and scratches. This property eliminates the risk of slow or rapid crack propagation, which guarantees the safety of the network operation, and prolong the service life of the pipe.

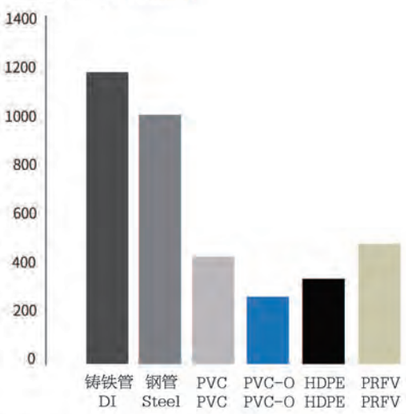
7、太极蓝®管优良的抗水锤能力，保证管网安全

TaijiBlue® PVC–O pipe excellent water hammer resistance

水锤（bar） water hammer



波速（m/s） celerity

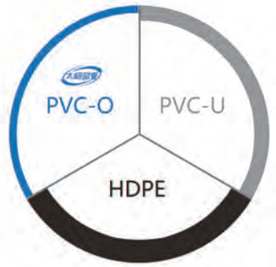


太极蓝®管管壁更薄，内径更大，因此水锤波速更低，水锤压力更小；同时，太极蓝®管卓越的韧性吸收了水锤冲击能，对水网及其各个部件形成了保护，减少乃至消除了打开和关闭水网时爆管事故的 发生，管网运行更加安全。

TaijiBlue® PVC–O pipe has thinner thickness, bigger inside diameter, it gets less water hammer celerity, less water hammer pressure. TaijiBlue® PVC–O pipe excellent toughness absorbs impact of water hammer, each component of the water network is protected during operation, therefore the possibility of breakages during opening and closing of the water network is reduced and even elimiated.

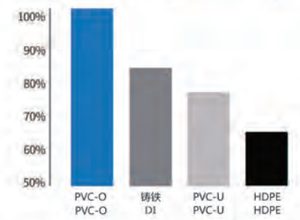
8、太极蓝®管提高输水能力 ，降低运行成本

TaijiBlue® PVC–O pipe increase the hydraulic capacity, reduce operating cost



输水能力对比表

Camparison of hydraulic capacity



太极蓝®管管壁更薄、更光滑，输水流量比其他同样外径的管材提高5%–50%；水头损失更小，节省更多能源，管网运行成本更低。

TaijiBlue® PVC–O pipe has thinner thickness and inside wall smoother. It can deliver 5–50% more hydraulic capacity than traditional pipes. It has less water head loss, more save energy and lower operating cost.

9、太极蓝®管质量轻，易于搬运，安装成本低

TaijiBlue® PVC–O pipe lighter, easy handle, lower installation cost

太极蓝®管强度高，重量轻，仅为PE100和PVC–U管材的1/2，球管的1/10–1/4，易于搬运、安装。大多数情况下，搬运、安装不需要机械车辆（管材直径可达dn315），即提高了安装速度，又降低了安装成本，同时减少了劳动工伤。

TaijiBlue® PVC–O pipe weight is only half of traditional plastic pipes(eg. PE100, PVC–U), 1/10 to1/4 of ductile iron pipe. In most cases, it dose not need mechanical assistance (up to dn315mm). The installation speed is increased significantly, and the installation cost is reduced largely.

10、太极蓝®管安装便利

TaijiBlue® PVC-O pipe convenient and fast connections

太极蓝®管管体轻，采用柔性连接，不仅施工安装简单快速，而且确保管线安装完毕后接头不会移位，管线水密性好，漏失少，珍贵的水资源得到有效输送。

TaijiBlue® PVC-O pipe adopts rubber ring seal and joint, which makes installation convenient and fast, and guarantees not to displace once the pipes have been installed. So the water tightness of the network is well, and water leakage rate is lower. The precious water resources is transported efficiently.

11、太极蓝®管具有优良的卫生性能

TaijiBlue® PVC-O pipe excellent health properties

太极蓝®管分子双轴取向技术的实现是基于优质原料，无法掺假，从根本上杜绝了不合格原材料的使用，充分保证了管道的卫生性能。

太极蓝®管耐电化学腐蚀，耐微生物和大生物体的侵害，管材内外亦无需涂层保护，输水过程中不存在其他物质向水体的迁移，使得水体在输送时水质不会被二次污染。

The biaxially orientation process of TaijiBlue® PVC-O pipe is based on fresh and high quality material, which means inferior material cannot be used. It guarantees the quality of the conveyed water.
TaijiBlue® PVC-O pipe is immune to corrosion, does not require any type of coating. Therefore no imgration to the water from micro- and macro-organisms, the quality of the conveyed water remains always unaltered.

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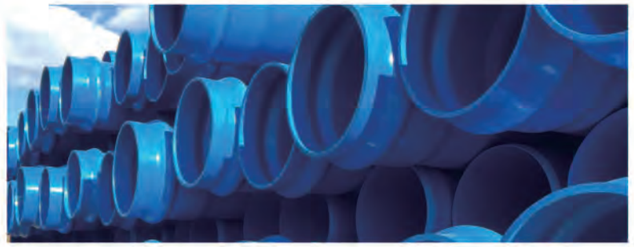
产品规格

Product Specifications

太极蓝®管根据国家标准GB/T41422-2022生产。

According to GB/T41422-2022.



PVC-O 管材，C=1.6

Product Range (C=1.6)

材料等级	400 class				450 class			
公称压力PN Nominal Pressure	10	12.5	16	20	12.5	16	20	25
SDR	51	41	33	26	45.8	37	29	23.4
公称外径d_n,mm Nominal Diameter	公称壁厚e_n,mm Nominal Wall Thickness							
110	2.2	2.7	3.4	4.2	2.4	3.1	3.8	4.7
125	2.5	3.1	3.9	4.8	2.8	3.5	4.3	5.4
140	2.8	3.5	4.3	5.4	3.1	3.9	4.8	6.0
160	3.2	4.0	4.9	6.2	3.5	4.4	5.5	6.9
180	3.6	4.4	5.5	6.9	4.0	5.0	6.2	7.7
200	3.9	4.9	6.2	7.7	4.4	5.5	6.9	8.6
225	4.4	5.5	6.9	8.6	5.0	6.2	7.7	9.6
250	4.9	6.2	7.7	9.6	5.5	6.9	8.6	10.7
280	5.5	6.9	8.6	10.7	6.2	7.7	9.6	12.0
315	6.2	7.7	9.7	12.1	6.9	8.7	10.8	13.5
355	7.0	8.7	10.9	13.6	7.8	9.8	12.2	
400	7.9	9.8	12.3	15.3	8.8	11.0	13.7	
450	8.8	11.0	13.8		9.9	12.4	15.4	
500	9.8	12.3	15.3		11.0	13.7	17.1	
560	11.0	13.7			12.3	15.4		
630	12.3	15.4			13.8	17.3		

性能指标

Performance and Index

太极蓝®管对生产原料和产品均有技术要求，见表1、表2

Taiji Blue® Pipe's material and product technical requirements (see table 1,table 2)

表1
table 1

测试项目 Test items	技术要求 Technical requirements	试验方法 Test method
K值 K value	≥64	GB/T 1632/ISO 1628
维卡软化温度 Vicat softening temperaature	≥80℃	GB/T 8802/ISO 2507

表2
table 2

测试项目 Test items		技术要求 Technical requirements		试验方法 Test method
轴向拉伸强度（MPa） Uniaxial tensile strength		≥48		GB/T 8804/ISO 6259
静液压强度 Hydrostatic strength	20℃，10h	52	60	GB/T 6111/ISO 1167
	20℃，1000h	46	53	
	60℃，1000h	25	28	
落锤冲击试验[a] Resistance to external blow		TIR≤10%		GB/T 14152/ISO 3127

[a] PVC-O与PVC-U管材的落锤冲击试验冲能对比详见 P18 “韧性比较”表 .
The comparison of blow energy between PVC-O and PVC-U refer Page 18 toughness comparison table.

性能比较

Performance Comparison

1、强度比较

Strength Comparison

管材种类 Pipe Kinds	PE100	PVC-U	PVC-M	PVC-O		
MRS/MPa	10	25	25	40	45	50
C	1.25	2.0	1.6	1.6	1.6	1.6
σs/MPa	8	12.5	16	25	28	32

2、韧性比较

Toughness Comparison

公称外径 d_n Nominal outside diameter, d_n, mm	PVC-O 管材 PVC-O pipe			PVC-U管材 PVC-U pipe		
	落锤质量 (kg) Total Mass (kg)	冲击高度 (m) Drop Height (m)	冲　能 (Nm) Blow Energy (Nm)	落锤质量 (kg) Total Mass (kg)	冲击高度 (m) Drop Height (m)	冲　能 (Nm) Blow Energy (Nm)
110	6.3	2	126	1.0	1.6	16
125	6.3	2	126	1.25	2.0	25
140	8	2	160	1.6	1.8	28.8
160	8	2	160	1.6	2.0	32
180	10	2	200	2.0	1.8	36
200	10	2	200	2.0	2.0	40
≥225	12.5	2	250	2.5	1.8	45
试验温度 Test temperature	-25℃			0℃		

3、刚性比较
Strength Comparison

管材种类 Pipe Kinds	PE100	PVC-U	PVC-M	PVC-O
弹性模量，MPa Elastic Modulus MPa	900	3000	3000	4000

4、重量比较
Weight Comparison

dn(DN)	PVC-M	PVC-U	PE100	球管(DI)
100(100)	149	182	185	1250
160(150)	149	189	189	909
225(200)	154	192	196	667
250(250)	154	192	192	714
315(300)	154	192	196	556
355(350)	154	189	196	556
400(400)	154	189	196	526
450(450)	154	192	196	500
500(500)	154	192	196	455
630(600)	154	192	200	385

注： 1、PVC-O管材米重为100，其他管材的米重为相对值；
2、塑料管材采用1.0MPa，PVC-O: 400级，球管：K9；
NOTE:1、PVC-O pipe weight per meter is 100, and other pipes weight per meter is a comparative value.
2、Plastic pipe 1.0MPa, PVC-O: 400 class, DI: K9.

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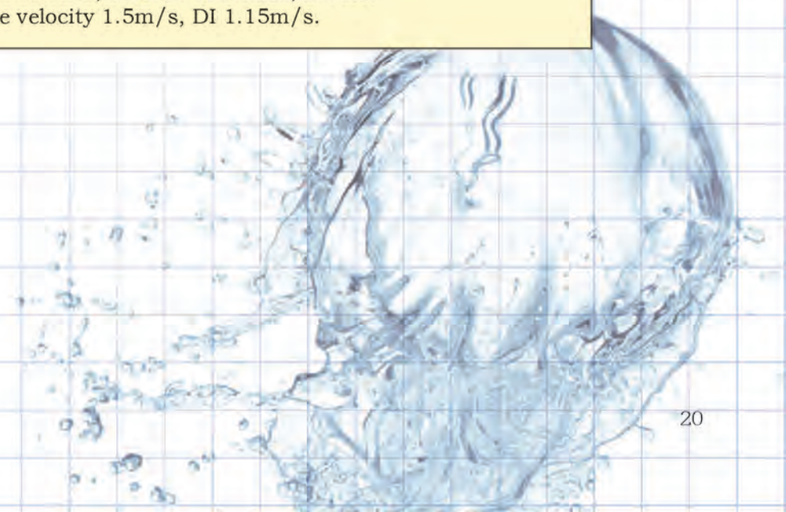
5、流量比较
Flow Comparison

dn(DN)	PVC-M	PVC-U	PE100	球管(DI)
100(100)	95.3	92	81	54.5
160(150)	95.4	91.7	81.3	63.2
225(200)	95.2	91.8	81	47.6
250(250)	95.2	91.7	81.2	79.6
315(300)	95.2	91.7	81.2	67.3
355(350)	95.3	91.8	81.2	76.2
400(400)	95.3	91.8	81.3	79.7
450(450)	95.2	91.8	81.1	79.6
500(500)	95.3	91.8	81.1	79.6
630(600)	95.2	91.7	81.1	67.2

注： 1、PVC-O管材流量为100，其他管材的流量为相对值；
2、塑料管取用1.0MPa，PVC-O: 400级，球管：K9；
3、塑料管取经济流速1.5m/s，球管取经济流速1.15m/s。
NOTE: 1、PVC-O pipe flow per hour is 100, and other pipes flow per hour is a comparative value.
2、Plastic pipe 1.0MPa, PVC-O: 400 class, DI: K9.
3、Plastic pipe velocity 1.5m/s, DI 1.15m/s.



PVC-O国家标准主要起草单位

Main Drafting Unit of National Standard of PVC–O Pipes

PVC-O施工技术规程主要起草单位

Main Drafting Unit of PVC–O Pipe Technical Specification for Construction

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连接方式及管件

Connection and Fittings

1、弹性密封圈连接

Ring Connection

2、管件

Fittings

太极蓝®管的应用领域

TaijiBlue® PVC-O Pipe Application Field

综合管廊建设的优选材料。

太极蓝®管独特的物理和机械性能，重量轻和便于安装的优势使其特别适用于中高压（1.0—2.5MPa）、施工条件不佳、水压波动较大、温度不高于45℃的输水系统和灌溉系统的主干线和支线管道，是综合管廊建设的优选材料。

在英国、法国、荷兰、葡萄牙、美国、澳大利亚、南非和日本等国家应用多年。

The best pipe material of utility tunnel.
With the unique physical and mechanical properties, lighter weight and easy installing, TaijiBlue® PVC-O pipe is special suitable to main and branch supply line of drinking water and irrigation system below 45℃ when the installation environment is poor, and the variation of water pressure is large. It is better choice of the utility tunnels.
PVC-O Pipes are used in the UK, France, Holland, Portugal, the US, Australia, South Africa and Japan and other countries for many years.

- 太极蓝® 管的高强度，使材料更省、质量更轻、内径更大，能力更强，压力更高，更经济；
- 太极蓝® 管极强的韧性使之可以经受野蛮冲击、锐物开口和寒冷施工，抗水锤能力更强，更安全；
- 太极蓝®管良好的密封性能，很大程度的降低了管网漏失率；
- 高达百年的使用寿命也减少了更换管网造成的损失；
- 所有这一切，都使得太极蓝®管成为我们为子孙后代管理水资源的更好选择。

- TaijiBlue® PVC-O pipe is higher strength, thinner thickness, lighter, bigger inner diameter, higher pressure, more economy.
- TaijiBlue® PVC-O pipe can bear poor environment and installing in cold temperature, excellent water hammer resistance.
- TaijiBlue® PVC-O pipe is tightness excellent, The leakage rate of pipe network is reduced to the lowest value.
- Over 100 years service life reduces the replacement of the pipe network.
- Therefore, TaijiBlue® PVC-O pipe is better choice of water network.

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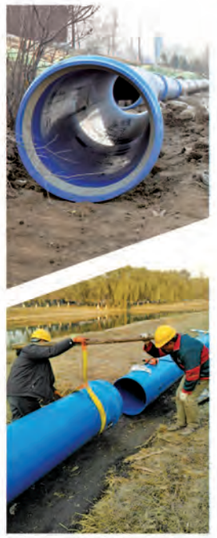
工程实例

Project Cases



北京市清河管线项目

Pressure Pipeline Project of Qinghe, Beijing City

陕西饮水工程项目

Potable Water Project of Shanxi Province

山东省输水工程

Water Supply Project of Shandong Province

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工程实例
Project Cases

经济、安全、便利、无损。
Economic, safe, convenient, intact.

- 山西省输水工程
  Water Supply Project of Shanxi Province
- 青海太极蓝®管田间配套工程
  Qinghai Province Irrigation Works
- 张家口太极蓝®管供水工程
  Water Supply Project of Zhangjiakou
- 内蒙古供水工程
  Water supply project of Inner Mongolia.
- 重庆山区输水工程
  Water Supply Project of Chongqing mountainous area