



山东东宏管业股份有限公司
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工矿类产品选型手册

Industrial and mining products selection manual

中国·曲阜 P.R.China

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微信公众号



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CATALOGUE

PART 1 ENTERPRISE

ENTERPRISE PROFILE	03
FOUNDER PROFILE	05

PART 2 PRODUCTS

POLYETHYLENE COMPOSITE PIPE SYSTEM FOR MINING STEEL WIRE MESH	07
MINING POLYETHYLENE PIPE SYSTEM	27
MINERAL COATING ANTI-CORROSION PIPE SYSTEM	45
ANTICORROSIVE STEEL PIPE FITTING PRODUCT SERIES	54
MINING GAS PIPE SYSTEM	55
THERMAL INSULATION PIPE SYSTEM FOR MINING	59

PART 3 GLOBAL CUSTOMERS

PARTNERS	63
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中国工程管道全产业链基地

China Engineering Pipeline Industry Base





INDUSTRIAL PARK OF DONGHONG B

ENTERPRISE PROFILE

DONGHONG PIPE INDUSTRY IN CHINA ENGINEERING PIPELINE WHOLE INDUSTRY BASE

Donghong Stock is an engineering pipeline manufacturer, pipeline engineering service provider and pipeline engineering general contractor with four categories of functional and customized pipelines of "special pipe in industrial and mining field, special pipe for rain and sewage diversion, special pipe in municipal field, and special pipe for national key engineering projects". Build an industrial ecosystem with the participation of design institutes, financial institutions, Hong Kong logistics, construction units, upstream and downstream enterprises and other parties. It is the only enterprise in the industry with the core intellectual property rights and design and manufacturing capabilities of modified materials and products for underground coal mine. The company now has more than 200 research and development personnel, more than 100 patents, has 23 categories of products 316 safety standard certificate, with "full plastic, steel-plastic composite, steel anti-corrosion" full series of pipeline design and manufacturing capacity.

The company is equipped with national CNAS laboratory, academician workstation, postdoctoral workstation, and Zhejiang University, University of Shanghai for Science and Technology and other institutions of higher learning and scientific research institutions, independently develop buckle, double seal, riveting and solid double seal, integral flange, integrated clamp and other connection methods. It has formed strategic cooperation with large petrochemical suppliers at home and abroad, with three intelligent production bases and five series of more than 2,000 varieties, which can meet the customized needs of customers.

Donghong, let the intelligent pipeline change human life, let the human pipeline transmission permanent safety. Strive to become the world's leading pipeline system integrated solution provider!



INDUSTRIAL PARK OF DONGHONG A

INDUSTRIAL PARK OF DONGHONG C

HELP THE NATIONAL PROJECT, THE ACHIEVEMENT OF BILLIONS OF ENTERPRISES

The company has the largest steel and plastic composite pipeline production base in China and the world's most advanced pipeline production line in the world. It is the standing director unit of China Plastic Pipeline Professional Committee, China Gas Association, Shandong Coal Mine Products Industry Association, the mining pipeline leader in China, and the only main board listed enterprise in the mining pipeline industry.

Donghong Stock is the first enterprise in the industry to promote the underground steel wire mesh skeleton polyethylene composite pipe to the field of coal mine, and is also the first enterprise to develop the steel wire mesh skeleton polyethylene composite pipe products above 3.5MPa and polymer material mining conductive technology system.

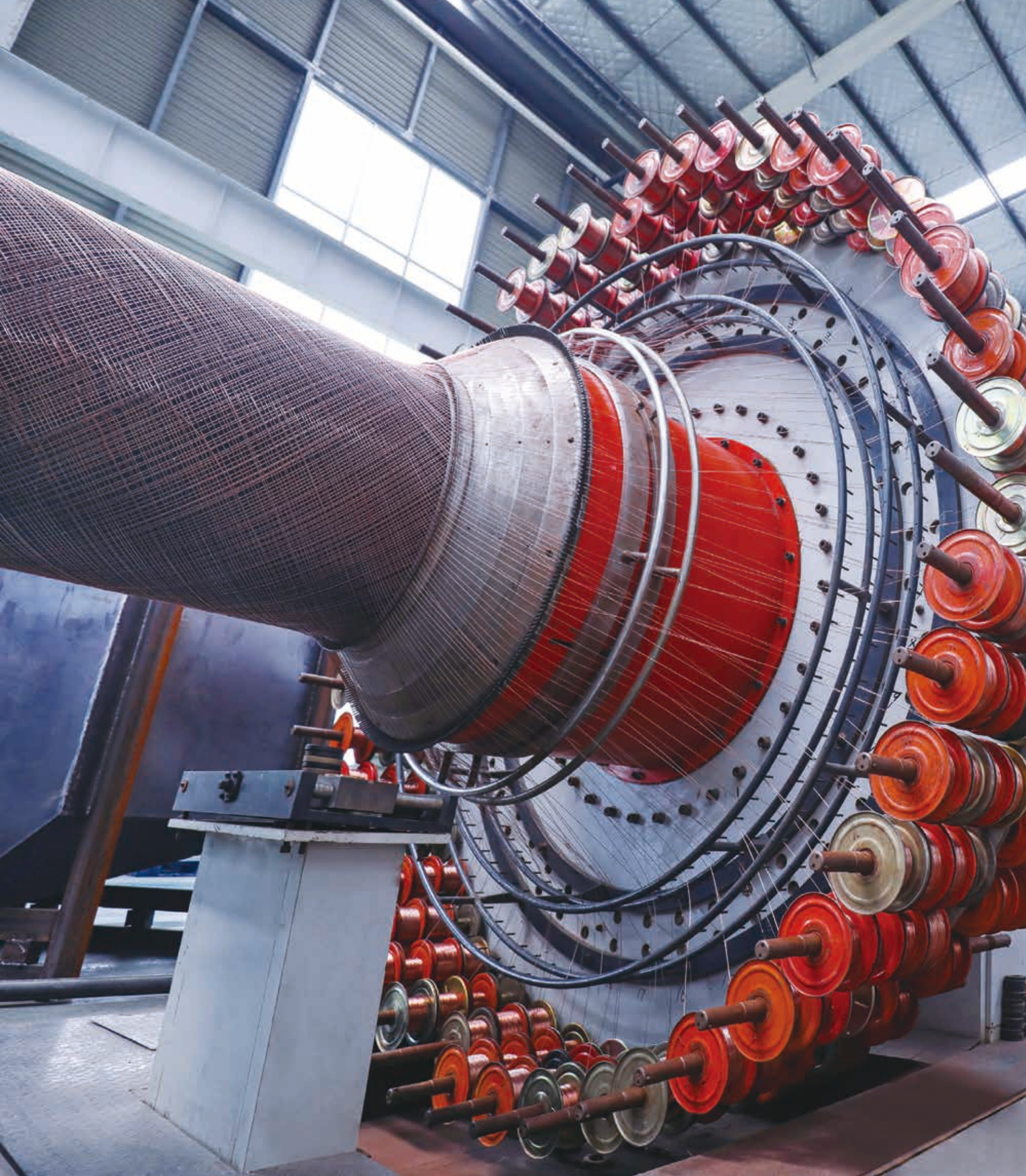
As the world's largest composite pipeline manufacturing base, the company relying on the national enterprise technology center, integration of upstream and downstream ecological resources, deepen the research of pipeline engineering digital, information, and intelligent, positive response to the national "Belt and Road" strategy, successively service Pakistan in coal, shenhua east coal mine and other national key projects and guodian construction for Inner Mongolia, ancient energy, huadian coal, huaneng coal, Shandong gold mining, Shandong energy group, with coal group, Shanxi, shaanxi coal, shaanxi coal, shaanxi energy, minmetals mining, Ningxia coal, Sichuan coal, China national coal group and other important customers.

Founder Mission

He comes from the hometown of Confucius, Qufu.
Hard childhood made him pick up the burden of the family from an early age
Not afraid of others despise, Just afraid no ambition by oneself
This sentence has been deeply imprinted in his heart
In 38 years, he started from scratch, work hard, and seek truth
Leading companies to keep making progress
Created the first listed company in the pipeline industry in China
He is a pioneer, and he is an entrepreneur.
The Belt and Road, the South-to-North Water Transfer Project, the Capital Airport, Penglai
Cross-Sea, Yellow River, Hanjiang to Weihe River Project, and Shenhua Shendong Coal Mine...
He supplies up to 470,000 kilometers pipelines for thousands of large-scale projects worldwide
Beyond the distance from the earth to the moon
He is hailed as "the leader of steel-plastic composite pipe applications in China."
He was born for the pipeline, which makes the sky much clearer.

**CHAIRMAN OF DONGHONG PIPE INDUSTRY CO., LTD.,
ECONOMIC CONSULTANT OF JINING MUNICIPAL PEOPLE'S GOVERNMENT
MEMBER OF THE STANDING COMMITTEE OF JINING MUNICIPAL PEOPLE'S CONGRESS
DEPUTY OF THE 13TH SHANDONG PROVINCIAL PEOPLE'S CONGRESS, VICE CHAIRMAN OF
CHINA MARKET COUNCIL
THE FATHER OF STEEL AND PLASTIC COMPOSITE PIPELINE APPLICATION IN CHINA**

倪立营
Ni Liying



STEEL WIRE REINFORCED THERMOPLASTIC PE COMPOSITE PIPE SYSTEM FOR MINE

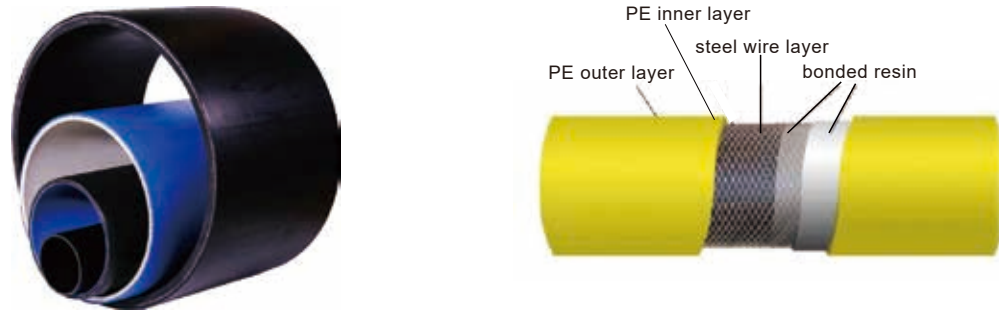
THE WORLD'S LARGEST STEEL WIRE MESH SKELETON COMPOSITE PIPELINE MANUFACTURING ENTERPRISE

Wire mesh skeleton plastic (polyethylene) composite pipe system is our country has independent intellectual property rights of the latest generation of steel composite pipe system, our company for steel mesh skeleton plastic (polyethylene) composite pipe system research application has accumulated more than ten years of experience, effectively solve the traditional pipeline service life is short, poor corrosion resistance, high product weight, poor flexibility, friction loss big defects.

Pipeline system pipe, pipe fittings and high and low pressure connection mode are complete, widely used in underground coal mine for water supply and drainage, nitrogen injection, gas drainage, pressure air and non-coal mine, chemical industry and other fields.

MINERAL STEEL WIRE MESH SKELETON PLASTIC (POLYETHYLENE) COMPOSITE PIPE

PRODUCT STRUCTURE



Polyethylene raw materials: the inner and outer polyethylene resin in the field of coal mine adopts flame retardant and anti static special modified materials (carbon nanotube CNT modified materials, permanent coloring special materials) used by the company with independent intellectual property rights. On the basis of the pipes meeting MT 181 and MT 558.1, the mechanical properties of the materials are improved.

Enhanced steel wire: using copper-plated steel wire conforming to GB / T 14450 requirements, the strength of 2050MPa, far exceeding the standard 1850MPa requirements.

Adhesive resin: the patented product using the company's independent intellectual property rights, has the advantages of strong steel wire adhesion and strong process adaptability.

PRODUCT EXECUTION STANDARDS

MT 181-1988	《Code for Safety Performance Inspection of Plastic Pipe in Coal Mine》
MT 558.1-2005	《Plastic Pipe for Underground Coal Mine — Part 1: Polyethylene Pipe》
AQ 1071-2009	《Safety Technical Requirements for Non-metallic Gas Transportation Pipe in Coal Mine》
CJ/T 189-2007	《Steel wire skeleton Plastic (polyethylene) Composite pipe and fittings》
CJ/T 537-2019	《Multilayer steel wire wound modified polyethylene wear-resistant composite pipe》
Q/0881 DHB017-2020	《Plastic (polyethylene) composite pipe》

SIZE OF PRODUCT

Steel wire mesh skeleton polyethylene liquid pipe for underground coal mine

OD dn/mm	PN MPa						
	0.8	1.0	1.25	1.6	2.0	2.5	3.5
	WALL THICKNESS e_n /mm						
50				4.5	5.0	5.5	5.5
63				4.5	5.0	5.5	6.0
75				5.0	5.0	5.5	6.0
90				5.5	5.5	7.5	8.5
110		5.5	5.5	7.0	7.0	9.0	9.5
140		5.5	5.5	8.0	8.5	10.0	10.5
160		6.0	6.0	9.0	9.5	11.0	12.5
200		6.0	6.0	9.5	10.5	11.0	
225		8.0	8.0	10.0	10.5	12.5	
250	8.0	10.5	10.5	12.0	12.0		
315	9.5	11.5	11.5	13.0	13.0		
355	10.0	12.0	12.0	14.0			
400	10.5	12.5	12.5	15.0			
450	11.5	13.5	13.5	16.0			
500	12.5	15.5	15.5	18.0			
560	17.0	20.0					
630	20.0	23.0					

Steel wire mesh skeleton polyethylene pumping gas pipe in underground coal mine

OD dn/mm	PN MPa		OD dn/mm	PN MPa	
	-0.097			-0.097	
	min e_n /mm			min e_n /mm	
50	5.5		225	11.0	
63	5.5		250	12.0	
75	5.5		315	15.0	
90	5.5		355	17.0	
110	7.5		400	19.0	
125	7.5		450	21.5	
140	8.0		500	24.0	
160	9.0		560	26.5	
200	9.5		630	30.0	

Polyethylene gas pipe with steel wire mesh skeleton in underground coal mine

OD dn/mm	PN / MPa			
	0.6	0.8	1.0	1.25
	公 e _n /mm			
50	4.5	5.0	5.5	5.0
63	4.5	5.0	5.5	5.5
75	5.0	5.0	5.5	6.0
90	5.5	5.5	5.5	6.0
110	7.0	7.0	7.5	8.5
140	8.0	8.5	9.0	9.5
160	9.0	9.5	10.0	10.5
200	9.5	10.5	11.0	12.5
225	10.0	10.5	11.0	
250	12.0	12.0	12.5	
315	13.0	13.0		
355	14.0			
400	15.0			
450	16.0			
500	18.0			

High pressure wire mesh skeleton polyethylene pipe

OD dn/mm	PN / MPa			
	2.0	2.5	3.5	4.0
	MIN en/mm			
63				6.0
75				9.5
90				10.0
110				12.0
125				12.0
160				13.0
200				15.0
225			15.5	16.0
250			16.0	16.5
315		17.0	17.0	17.5
355	14.5	17.5	17.5	18.0
400	15.0	18.5	18.5	19.0

Plastic (polyethylene) composite pipe Q / 0881DHB017-2020

OD dn/mm	PN/ MPa															
	0.8	1.0	1.25	1.6	2.0	2.5	3.0	3.5	4.0	5.0	6.3	7.0	8.0	9.0	10.0	
	MIN en/mm															
50				4.5	5.0	5.5	5.5	5.5	6.0	8.5	9.0	9.5	10.0	10.0	10.0	
63				4.5	5.0	5.5	5.5	5.5	6.5	8.5	9.0	10.0	10.0	10.0	10.0	
75				5.0	5.0	5.5	6.0	6.0	9.5	9.5	9.5	10.5	10.5	10.5	11.5	
90				5.5	5.5	5.5	6.0	6.0	10.0	10.5	10.5	11.5	11.5	11.5	12.0	
110	5.5	5.5	7.0	7.0	7.5	8.5	8.5	11.0	12.0	12.0	12.0	12.0	13.0	13.0		
125	5.5	5.5	7.5	8.0	8.5	9.5	9.5	11.0	12.0	12.0	12.0	13.0	13.0	15.0		
140	5.5	5.5	8.0	8.5	9.0	9.5	9.5	11.0	12.0	13.0	13.0	15.0	15.0	15.0		
160	6.0	6.0	9.0	9.5	10.0	10.5	10.5	11.0	12.0	14.0	14.0	15.0	15.0	15.0		
180	6.0	6.0	9.5	10.5	11.0	12.0	12.5	13.0	13.0	14.0	15.0	15.0	15.0	15.0		
200	6.0	6.0	9.5	10.5	11.0	12.0	12.5	13.0	13.0	15.0	15.0	15.0	15.0			
225	8.0	8.0	10.0	10.5	11.0	12.0	13.0	13.0	13.0	15.0	15.0					
250	8.0	10.5	10.5	12.0	12.0	12.5	14.0	14.0	14.0	15.0						
280	9.5	11.0	11.0	13.0	13.0	15.0	15.0	17.0	17.0	18.0						
315	9.5	11.5	11.5	13.0	13.0	15.0	15.0	18.0	18.0	19.0						
355	10.0	12.0	12.0	14.0	14.0	17.0	17.0	19.0	19.0							
400	10.5	12.5	12.5	15.0	16.0	17.0	17.0	19.0								
450	11.5	13.5	13.5	16.0	18.0	18.0	19.0									
500	12.5	15.5	15.5	18.0	19.0	22.0										
560	17.0	20.0	20.0	22.0	22.0											
630	20.0	23.0	23.0	26.0	26.0											
710	23.0	26.0	28.0	30.0												
800	27.0	30.0	32.0	34.0												
900	29.0	33.5	35.0	38.0												
1000	34.5	37.0	40.0	45.0												
1200	38.0	40.0	43.0													

Note: The model and pressure can be customized according to customer requirements.

PRODUCT PROPERTY

MECHANICAL PROPERTY

Serial number	item	index
1	Short-term hydro static test	According to CJ / T189-2007 standard, the test temperature is 20 ℃, liquid pipe 2 times nominal pressure and gas pipe 3.2 times nominal pressure for 1h, without rupture or leakage.
		According to CJ / T189-2007 standard, the test temperature is 80 ℃, the liquid pipe for 1.2 times the nominal pressure, and the gas pipe for 165h, without rupture and leakage.
		According to CJ / T537-2019 standard, the test temperature is 60 ℃, and the nominal pressure is 165h, without rupture and leakage.
2	blasting pressure	The pipe is boosted to blasting in the test temperature of 20 ℃, 60s-70s, and the blasting pressure is 3 times the nominal pressure.
3	negative pressure resistance	Under the negative pressure of 0.097MPa, keep the pipe pressure for 100h, with no flattening and damage.
4	pressure cracking stability	No cracking and cracking during 10-15s pressure to 50% of the nominal outer diameter of the composite pipe.
5	stripping strength	≥100N/cm
note: the above pipe performance is unified requirements, refined performance to implement relevant standards. Negative pressure resistance is only for negative pressure gas drainage pipe.		

Flame-retardant and anti static properties

serial number	item	index
1	Surface resistance	Supply and drainage pipe: the outer wall meter and the arithmetic mean value of resistance should not be greater than $10 \times 10^9 \Omega$
		Positive pressure duct: the outer wall surface and the resistance arithmetic average should not be greater than $10 \times 10^9 \Omega$
		Sprouting pipe: the inner and outer wall surface and the arithmetic mean value of resistance should not be greater than $10 \times 10^8 \Omega$
		Negative pressure duct: inner and outer wall surface and the arithmetic mean of resistance should not be greater than $10 \times 10^9 \Omega$
		Pipe for gas drainage: inner and outer wall meters and the arithmetic mean of resistance should not be greater than $10 \times 10^9 \Omega$
2	alcohol spray lamp combustion	The arithmetic mean of the flame combustion time of the six samples shall not be greater than 3s, and the flame combustion time of any specimen shall not be greater than 10s.
3		The arithmetic mean of the flameless combustion time of the 6 specimens shall not be greater than 20s, and the flameless combustion time of any specimen shall not be greater than 60s.

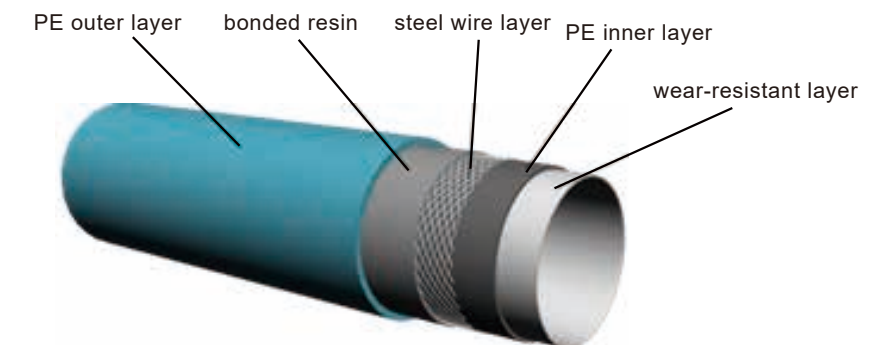
WIRE MESH SKELETON PLASTIC (POLYETHYLENE) WEAR-RESISTANT COMPOSITE PIPE

PRODUCT PRESENTATION

Wire mesh skeleton plastic (polyethylene) wear-resistant composite pipe is our company's latest generation of steel-plastic composite pipe system products, our company in the ordinary steel wire mesh skeleton polyethylene On the basis of the ene composite pipe system and combined with the research and application experience in the field of non-coal mine, the special pipe abrasion resistance is added to the inner wall of the pipe, which effectively solves the pain points of poor wear resistance, easy to fall off, high product weight and weak corrosion resistance, and reduces the total construction cost and shortening the construction cycle.

The pipeline system pipe materials, pipe fittings and high and low pressure connection mode are complete, which are widely used in the transportation of liquid and slurry medium whose long-term working temperature is not higher than 45℃ and the wear and corrosion of the inner wall of the pipeline.

PRODUCT STRUCTURE



Polyethylene raw material: the polyethylene layer is made of GB / T 13663 pipeline grade high-density polyethylene resin, with excellent slow crack growth resistance and excellent impact resistance.

Enhanced steel wire: using copper-plated steel wire conforming to GB / T 14450 requirements, the strength of 2050MPa, far exceeding the standard 1850MPa requirements.

Adhesive resin: the patented product using the company's independent intellectual property rights, has the advantages of strong steel wire adhesion and strong process adaptability.

Inner wear-resistant layer: adopt polyolefin elastomer wear-resistant material with fluorine and silicon modification independently developed by our company, and the wear-resistance is more than 2 times that of ultra-high molecular weight polyethylene. The wear-resistant layer and polyethylene inner layer are co-squeezed compound, and the wear-resistant layer will not peel and layer.

SIZE OF PRODUCT

OD dn/mm	PN /MPa														
	0.8	1.0	1.25	1.6	2.0	2.5	3.0	3.5	4.0	5.0	6.3	7.0	8.0	9.0	10.0
	MIN en /mm														
90				8.0	8.5	8.5	9.0	9.0	13.0	13.5	13.5	14.5	15.0	15.0	15.5
110		8.0	8.0	9.5	10.0	10.5	11.5	11.5	14.0	15.0	15.0	15.0	15.5	16.5	16.5
125		8.0	8.0	10.0	11.0	11.5	12.5	12.5	14.0	15.0	15.0	15.0	16.5	16.5	18.5
140		8.0	8.0	10.5	11.5	12.0	12.5	12.5	14.0	15.0	16.0	16.0	18.5	18.5	18.5
160		9.0	9.0	12.0	13.0	13.5	14.0	14.0	14.5	15.5	17.5	17.5	19.0	19.0	19.0
200		9.0	9.0	12.5	14.0	14.5	15.5	16.0	16.5	16.5	18.5	18.5	19.0	19.0	
225		11.0	11.0	13.0	14.0	14.5	15.5	16.5	16.5	16.5	19.0	19.0			
250	11.0	13.5	13.0	15.0	15.5	16.0	17.5	17.5	17.5	18.5					
280	13.0	14.5	14.5	16.5	17.0	19.0	19.0	21.0	21.5	22.5					
315	13.0	15.0	15.0	16.5	17.0	19.0	19.0	22.0	22.5	23.5					
355	13.5	15.5	15.5	17.5	18.0	21.0	21.0	23.0	23.5						
400	14.0	16.0	16.0	18.5	20.0	21.0	21.0	23.5							
450	15.5	17.5	17.5	20.0	22.0	22.0	23.5								
500	16.5	19.5	19.5	22.0	23.0	26.0									
560	21.0	24.0	24.0	26.0	26.0										
630	24.0	27.0	27.0	30.0	30.0										

Note: The wall thickness of the above pipe includes the thickness of wear layer, and the design thickness of wear layer is 2.5-4.0mm according to different models, and consult sales personnel for other models.

PRODUCT EXECUTION STANDARDS

Q / 0881DHB009-2020 Steel wire mesh skeleton Plastic (polyethylene) wear-resistant composite pipe

Note: The products shall implement the enterprise standards filed by our company on the enterprise standard information public service platform, or the technical specifications of other similar products.

PRODUCT PROPERTY

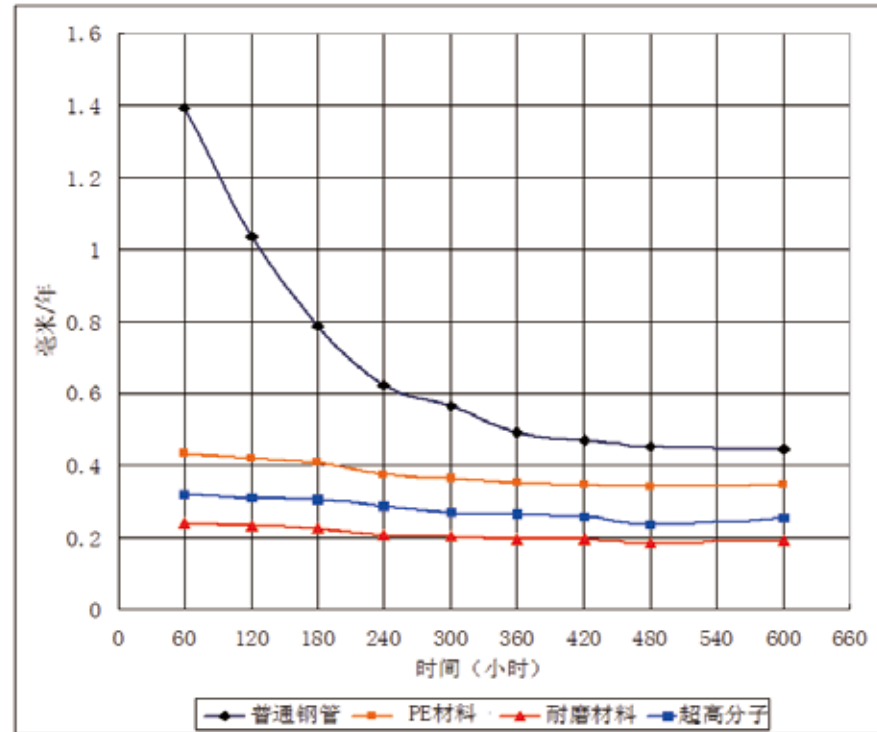
Wear-resistant materials

serial number	item	unit	index
1	melt mass flow rate	g/10min	0.50±0.20 (190°C、2.16kg)
2	tensile strength	MPa	≥18
3	fracture elongation	%	≥500
4	200 C oxidation induction time	min	≥30
5	mortar wear rate	%	≤0.3

Mechanical properties

serial number	item	index
1	Short-term hydro static test	pipe pressure at 20°C and 2 times nominal pressure, without rupture and leakage
2	Burst pressure	the pipe is boosted to blasting in the test temperature of 20°C, 60s-70s, blasting pressure 3 times the nominal pressure.
3	Stability of compression cracking	10-15s to 50% of the nominal outer diameter of composite pipe.
4	Peel strength	100N/cm

Wear-resistant properties



Abrasion resistance: Conclusion: mass concentration of iron concentrate slurry is 65%, average density: 4772 kg/m³; inner diameter is 50mm, flow rate is 1.8-2.0 m / s, single material erosion time is 60h, and total operation is 600h.0.1922 mm / year

CONNECTION TYPE

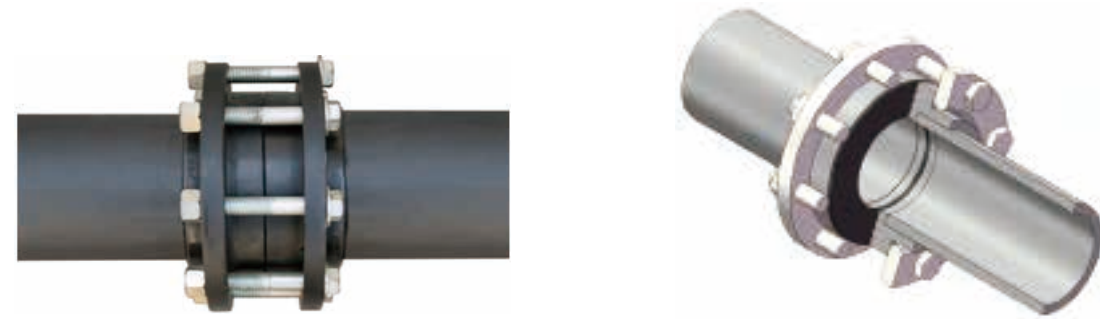
Electric fusion flange connection



OD dn/mm	PN/MPa			
	0.8	1.0	1.25	1.6
50		√	√	√
63		√	√	√
75		√	√	√
90		√	√	√
110		√	√	√
125		√	√	√
140		√	√	√
160		√	√	√
200		√	√	√
225		√	√	√
250	√	√	√	√
315	√	√	√	√
355	√	√	√	√
400	√	√	√	√
450	√	√	√	√
500	√	√	√	√
560	√	√	√	√
630	√	√	√	√

Note: This connection mode is suitable for steel wire mesh skeleton plastic (polyethylene) composite pipe connection and steel wire mesh skeleton plastic (polyethylene) wear-resistant composite pipe connection.

Spigot PE flange connection



OD dn/mm	PN/ MPa		
	1.0	1.25	1.6
50			√
63			√
75			√
90			√
110			√
125			√
140			√
160			√
200			√
225			√
250	√	√	√
315	√	√	√

Note: This connection method is suitable for steel wire mesh skeleton plastic (polyethylene) composite

Crimping compression flange connection



OD dn/mm	PN/ MPa				
	1.6	2.0	2.5	3.0	3.5
50	√	√	√	√	√
63	√	√	√	√	√
75	√	√	√	√	√
90	√	√	√	√	√
110	√	√	√	√	√
125	√	√	√	√	√
140	√	√	√	√	√
160	√	√	√	√	√
200	√	√	√		
225	√	√	√		
250	√	√			
315	√	√			

Note: This connection method is suitable for steel wire mesh skeleton plastic (polyethylene) composite pipe connection.

The compression clamp connection



OD dn/mm	PN/ MPa			
	1.6	2.0	2.5	3.5
50	√	√	√	√
63	√	√	√	√
75	√	√	√	√
90	√	√	√	√
110	√	√	√	√
125	√	√	√	√
140	√	√	√	√
160	√	√	√	√
200	√	√	√	
225	√	√	√	
250	√	√	√	

Note: This connection method is suitable for steel wire mesh skeleton plastic (polyethylene) composite pipe connection.

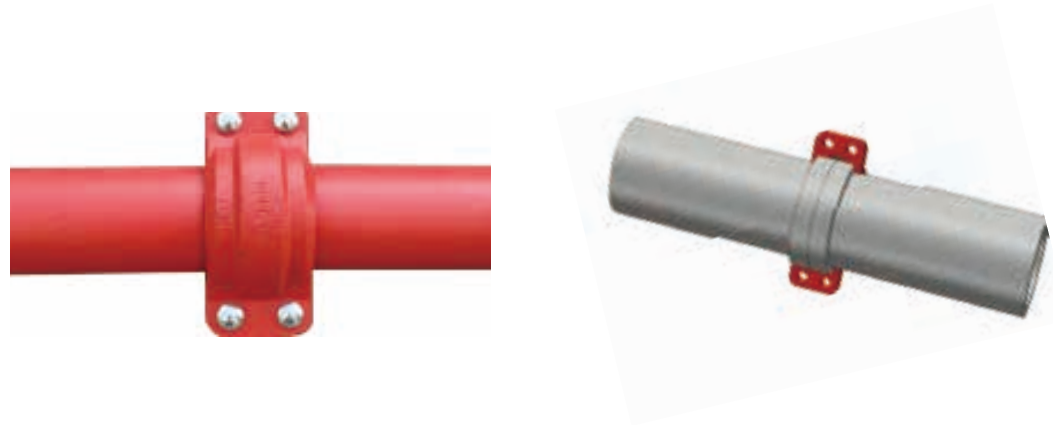
Double sealed steel flang connection



OD dn/mm	PN/MPa				
	1.6	2.0	2.5	3.5	4.0
50			√	√	√
63			√	√	√
75			√	√	√
90			√	√	√
110			√	√	√
125			√	√	√
140			√	√	√
160			√	√	√
200		√	√	√	√
225		√	√	√	√
250	√	√	√	√	√
315	√	√	√	▲	▲
355	▲	▲	▲	▲	▲
400	▲	▲	▲	▲	▲
450	▲	▲	▲		
500	▲	▲	▲		

Note: This connection mode is suitable for steel wire mesh skeleton plastic (polyethylene) composite pipe connection. The "√" in the table is marked as riveting reinforced double seal connection, and the "▲" is marked as mechanical reinforced double seal connection.

Integrated clamp connection



OD dn/mm	PN/ MPa			
	1.6	2.0	2.5	3.5
90	√	√	√	√
110	√	√	√	√
125	√	√	√	√
140	√	√	√	√
160	√	√	√	√
200	√	√	√	√
225	√	√	√	
250	√	√	√	
315	√	√	√	

Note: This connection mode is suitable for steel wire mesh skeleton plastic (polyethylene) composite pipe connection and steel wire mesh skeleton plastic (polyethylene) wear-resistant composite pipe connection.

one-piece flange connection



OD dn/mm	PN/ MPa				
	0.8	1.0	1.25	1.6	3.5
90				√	√
110		√	√	√	√
125		√	√	√	√
140		√	√	√	√
160		√	√	√	√
200		√	√	√	√
225		√	√	√	√
250	√	√	√	√	√
315	√	√	√	√	√

Note: The data in this table is suitable for the steel wire mesh skeleton plastic (polyethylene) pipe connection in coal mine.

One-piece flange connection



OD dn/mm	PN/ MPa			
	0.8	1.0	1.25	1.6
90				√
110		√	√	√
125		√	√	√
140		√	√	√
160		√	√	√
200		√	√	√
225		√	√	√
250	√	√	√	√
315	√	√	√	√

Note: This connection mode is suitable for steel wire mesh skeleton plastic (polyethylene) wear-resistant composite pipe connection.

T type double seal connection



OD dn/mm	PN/ MPa									
	2.5	3.0	3.5	4.0	5.0	6.3	7.0	8.0	9.0	10.0
90				√	√	√	√	√	√	√
110	√	√	√	√	√	√	√	√	√	√
125	√	√	√	√	√	√	√	√	√	√
160	√	√	√	√	√	√	√	√	√	√
200	√	√	√	√	√	√	√	√	√	
225	√	√	√	√	√	√	√			
250	√	√	√	√	√					

Note: This connection mode is suitable for steel wire mesh skeleton plastic (polyethylene) composite pipe connection and steel wire mesh skeleton plastic (polyethylene) wear-resistant composite pipe connection.



COATING ANTICORROSIVE PIPE SYSTEM FOR MINE

A LEADING GLOBAL PROVIDER OF INTEGRATED SOLUTIONS FOR PIPELINE SYSTEMS

As a new type of pipe, polyethylene pipe is widely used in underground water supply and drainage, nitrogen injection, gas drainage, non-coal mine and chemical industry with its flame retardant and anti-static performance.

POLYETHYLENE PIPE FOR UNDERGROUND COAL MINE

PRODUCT STRUCTURE



Coal mine with polyethylene pipe for single layer solid wall pipe, using our company has independent intellectual property rights of carbon nano tubes (CNT) modified material production, high conductive fiber carbon nano (CNT) instead of traditional carbon black conductive agent added only 30% of the carbon black conductive agent, anti static, flame retardant performance is better than MT181 standard requirements and the performance indexes are higher than the traditional carbon black conductive agent pipeline. In particular, the long-term hydro hydraulic performance of the pipeline is much higher than that of traditional products, and the pipeline system has better safety and long-term use.

PRODUCT EXECUTION STANDARDS

- MT 558.1-2005 《Plastic pipes for underground Coal Mine- -Part 1: Polyethylene pipes》
- MT 181-1988 《Code for Safety Performance Inspection of Plastic Pipe in Coal Mine》
- AQ 1071-2009 《Safety Technical Requirements for Non-metallic Gas Transportation Pipe in Coal Mine》
- GB/T 13663.2-2018 《Polyethylene (PE) piping system for water supply-Part 2: Pipe materials》

SIZE OF PRODUCT

PE 80 class coal mine underground for polyethylene pipe

OD dn/mm	MIN en/mm			
	standard size ratio			
	SDR21	SDR17	SDR13.6	SDR11
	PN/M Pa			
	0.6	0.8	1.0	1.25
20				2.0
25			2.0	2.3
32		2.0	2.4	2.9
40	2.0	2.4	3.0	3.7
50	2.3	3.0	3.7	4.6
63	2.9	3.8	4.7	5.8
75	3.4	4.5	5.6	6.8
90	4.1	5.4	6.7	8.2
110	5.0	6.6	8.1	10.0
125	5.7	7.4	9.2	11.4
140	6.4	8.3	10.3	12.7
160	7.3	9.5	11.8	14.6
180	8.2	10.7	13.3	16.4
200	9.1	11.9	14.7	18.2
225	10.2	13.4	16.6	20.5
250	11.4	14.8	18.4	22.7
280	12.7	16.6	20.6	25.4
315	14.3	18.7	23.2	28.6
355	16.1	21.1	26.1	32.2
400	18.1	23.7	29.4	36.3
450	20.4	26.7	33.1	40.9
500	22.7	29.7	36.8	45.4
560	25.4	33.2	41.2	50.8
630	28.6	37.4	46.3	57.2
710	32.3	42.1	52.2	
800	36.4	47.4	58.8	
900	40.9	53.3		
1000	45.4	59.3		

PE100 class coal mine underground for polyethylene pipe

OD dn/mm	WALL THICKNESS e_s /mm			
	STANDARD SIZE RATIO			
	SDR21	SDR17	SDR13.6	SDR11
	PN/ MPa			
	0.8	1.0	1.25	1.6
32				3.0
40				3.7
50				4.6
63			4.7	5.8
75		4.5	5.6	6.8
90	4.3	5.4	6.7	8.2
110	5.3	6.6	8.1	10.0
125	6.0	7.4	9.2	11.4
140	6.7	8.3	10.3	12.7
160	7.7	9.5	11.8	14.6
180	8.6	10.7	13.3	16.4
200	9.6	11.9	14.7	18.2
225	10.8	13.4	16.6	20.5
250	11.9	14.8	18.4	22.7
280	13.4	16.6	20.6	25.4
315	15.0	18.7	23.2	28.6
355	16.9	21.1	26.1	32.2
400	19.1	23.7	29.4	36.3
450	21.5	26.7	33.1	40.9
500	23.9	29.7	36.8	45.4
560	26.7	33.2	41.2	50.8
630	30.0	37.4	46.3	57.2

PE100 class coal mine underground for polyethylene pipe

OD dn/mm	WALL THICKNESS e_n /mm						
	STANDARD SIZE RATIO						
	SDR9	SDR11	SDR13.6	SDR17	SDR21	SDR26	SDR33
	TUBE SERIES						
	S4	S5	S6.3	S8	S10	S12.5	S16
	PN/ MPa						
2.0	1.6	1.25	1.0	0.8	0.6	0.5	
20	2.3	2.3					
25	3.0	2.3	2.3				
32	3.6	3.0	2.4				
40	4.5	3.7	3.0				
50	5.6	4.6	3.7	3.0			
63	7.1	5.8	4.7	3.8	3.0		
75	8.4	6.8	5.6	4.5	3.6		
90	10.1	8.2	6.7	5.4	4.3	3.5	
110	12.3	10.0	8.1	6.6	5.3	4.2	
125	14.0	11.4	9.2	7.4	6.0	4.8	
140	15.7	12.7	10.3	8.3	6.7	5.4	
160	17.9	14.6	11.8	9.5	7.7	6.2	
180	20.1	16.4	13.3	10.7	8.6	6.9	
200	22.4	18.2	14.7	11.9	9.6	7.7	
225	25.2	20.5	16.6	13.4	10.8	8.6	
250	27.9	22.7	18.4	14.8	11.9	9.6	
280	31.3	25.4	20.6	16.6	13.4	10.7	
315	35.2	28.6	23.2	18.7	15.0	12.1	9.7
355	39.7	32.2	26.1	21.1	16.9	13.6	10.9
400	44.7	36.3	29.4	23.7	19.1	15.3	12.3
450	50.3	40.9	33.1	26.7	21.5	17.2	13.8
500	55.8	45.4	36.8	29.7	23.9	19.1	15.3
560		50.8	41.2	33.2	26.7	21.4	17.2
630		57.2	46.3	37.4	30.0	24.1	19.3
710		64.5	52.2	42.1	33.9	27.2	21.8
800		72.6	58.8	47.4	38.1	30.6	24.5
900		81.7	66.2	53.3	42.9	34.4	27.6
1000		90.2	72.5	59.3	47.7	38.2	30.6
1200			88.2	67.9	57.2	45.9	36.7

Note: Other outer diameter dimensions and wall thickness dimensions can be designed separately. This table can be used for water supply and drainage lines with flame retardant and static electricity requirements.

PRODUCT PROPERTY

mechanical property

Serial number	item	index
1	Hydraulic test	according to MT558.1-2005 test conditions, PE80 ring stress 9.0MPa. PE100 level ring stress 12.0MPa, pressure for 100h, no rupture, no leakage. The pipe is pressed to the inner wall to overlap, and there should be no cracks and damage.
2	Negative pressure resistance	under the negative pressure of 0.097MPa, keep the pressure for 100h, and there should be no flattening and damage.
3	Flat performance	the pipe is pressed to the inner wall overlap, there should be no crack and damage.
4	Drop hammer impact test	According to the MT558.1-2005 test conditions, 9 out of 10 samples should be free of cracks and damage.
5	Elongation	fracture should not be less than 300%

Note: The above pipe performance is the unified requirement, and the refined performance is subject to the relevant standards. Negative pressure resistance is only for negative pressure gas drainage pipe.

Flame-retardant and anti static properties

Serial number	item	index
1	sheet resistance	Supply and drainage pipe: the outer wall meter and the arithmetic mean value of resistance should not be greater than $10 \times 10^9 \Omega$
		Positive pressure duct: the outer wall surface and the resistance arithmetic average should not be greater than $10 \times 10^8 \Omega$
		Sprouting pipe: the inner and outer wall surface and the arithmetic mean value of resistance should not be greater than $10 \times 10^8 \Omega$
		Negative pressure duct: inner and outer wall surface and the arithmetic mean of resistance should not be greater than $10 \times 10^9 \Omega$
		Pipe for gas drainage: inner and outer wall meters and the arithmetic mean of resistance should not be greater than $10 \times 10^6 \Omega$
2	Alcohol spray lamp burning	The arithmetic mean of the flame combustion time of the six samples shall not be greater than 3s, and the flame combustion time of any specimen shall not be greater than 10s.
		The arithmetic mean of the flameless combustion time of the 6 specimens shall not be greater than 20s, and the flameless combustion time of any specimen shall not be greater than 60s.

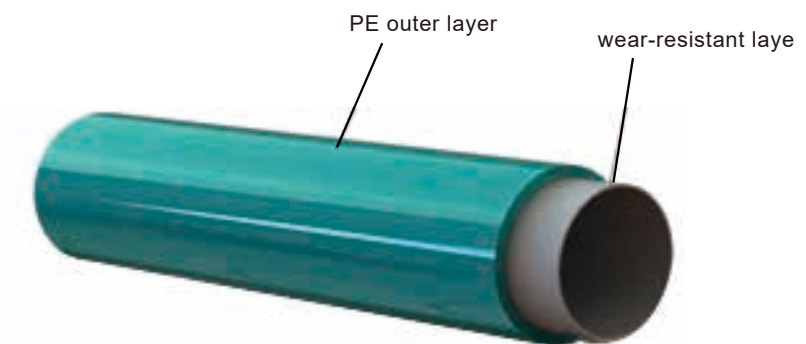
POLYETHYLENE WEAR-RESISTANT COMPOSITE PIPE

PRODUCT PRESENTATION

Polyethylene wear-resistant composite pipe is our latest generation of wear-resistant PE solid wall pipe system products, our company on the basis of ordinary polyethylene pipeline system and research experience in the field of coal mine, in the pipe wall added pipe special wear resistance, effectively solve the traditional pipe wear resistance, easy to wear off, product weight, poor corrosion resistance pain points, at the same time reduce the total construction cost, shorten the construction cycle.

Pipeline system pipes, pipe fittings and connection modes are complete, widely used in the mining field, the working temperature is not higher than 45°C, and suitable for the wear and corrosion of the pipe inner wall delivery of the eroded liquid and slurry medium.

PRODUCT MIX



Polyethylene wear-resistant composite pipe is a single layer of solid wall pipe, using special pipe grade wear-resistant polyethylene resin as the main raw material production. The wear resistant layer and the inner layer of polyethylene (PE) are co-squeezed out, and the wear resistant layer does not fall off or peel. For the specific wear resistance performance, refer to the wire mesh skeleton plastic (polyethylene) wear-resistant composite pipe.

PRODUCT EXECUTION STANDARDS

Q / 0881DHB003-2018 Polyethylene Wear-resistant Composite Pipe

Note: The products shall implement the enterprise standards filed by our company through the enterprise standard information public service platform.

PRODUCT PROPERTY

Wear resistant material

Serial number	item	unit	index
1	Melt mass flow rate	g/10min	0.50±0.20 (190°C、2.16kg)
2	tensile strength	MPa	≥18
3	elongation at break	%	≥500
4	200°C oxidation induction time	min	≥30
5	Mortar wear rate	%	≤0.3

Hydro static strength

Serial number	item	index
1	Hydro static test	20°C, annular stress 12.0MPa pressure for 100h, no rupture, no leakage;
2		80°C, annular stress 5.5MPa for 165h, no rupture, no leakage;
3		80°C, annular stress 5.0MPa pressure for 1000h, no rupture, no leakage;

SIZE OF PRODUCT

OD dn/mm	PN/MPa			
	0.8	1.0	1.25	1.6
	WALL THICKNESS e_n /mm			
90	6.8	7.9	9.7	11.2
110	7.8	9.1	11.1	13.0
125	8.5	9.9	12.2	14.4
140	9.2	10.8	13.3	15.7
160	10.7	12.5	15.3	18.1
200	12.6	14.9	18.2	21.7
250	14.9	17.8	21.9	26.2
280	16.9	20.1	24.6	29.4
315	18.5	22.2	27.2	32.6
355	20.4	24.6	30.1	36.2
400	22.6	27.2	33.4	40.3
450	25.5	30.7	37.6	45.4
500	27.9	33.7	41.3	49.9
560	30.7	37.2	45.7	55.3
630	34.5	41.9	51.3	62.2

CONNECTING MODE OF MINING POLYETHYLENE PIPE

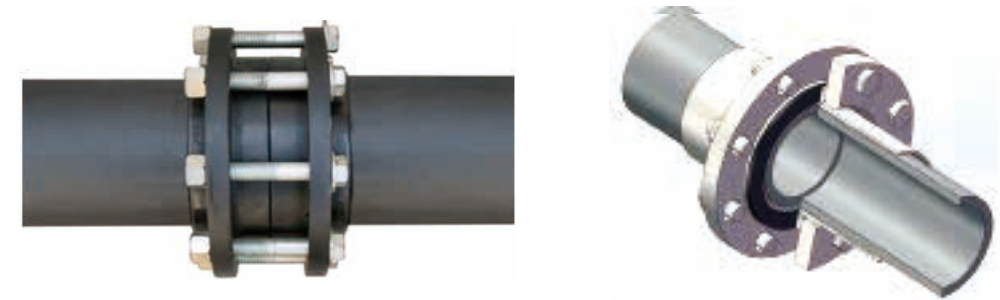
One-piece flange connection



OD dn/mm	PN/ MPa			
	0.8	1.0	1.25	1.6
90		√	√	√
110		√	√	√
125		√	√	√
140		√	√	√
160		√	√	√
180		√	√	√
200		√	√	√
225		√	√	√
250	√	√	√	√
315	√	√	√	√

Note: This connection mode is suitable for steel wire mesh skeleton plastic (polyethylene) composite pipe connection and steel wire mesh skeleton plastic (polyethylene) wear-resistant composite pipe connection.

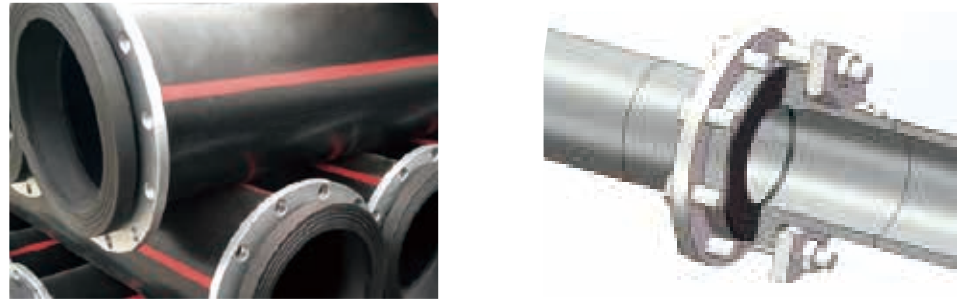
Bearing PE flange connection



OD dn/mm	PN/MPa			
	SDR21	SDR17	SDR13.6	SDR11
50	√	√	√	√
63	√	√	√	√
75	√	√	√	√
90	√	√	√	√
110	√	√	√	√
125	√	√	√	√
140	√	√	√	√
160	√	√	√	√
200	√	√	√	√
225	√	√	√	√
250	√	√	√	√
315	√	√	√	√

Note: This connection method is applicable for polyethylene pipe connection

Par-weld PE flange connection



OD dn/mm	PN/MPa			
	SDR21	SDR17	SDR13.6	SDR11
50				√
63				√
75			√	√
90		√	√	√
110	√	√	√	√
125	√	√	√	√
140	√	√	√	√
160	√	√	√	√
200	√	√	√	√
225	√	√	√	√
250	√	√	√	√
315	√	√	√	√
355	√	√	√	√
400	√	√	√	√
450	√	√	√	√
500	√	√	√	√
560	√	√	√	√
630	√	√	√	√
710	√	√	√	
800	√	√	√	
900	/	√		
1000	/	√		

Note: This connection method is applicable for polyethylene pipe connection.

Ft PE flange connection



OD dn/mm	PN/MPa			
	SDR21	SDR17	SDR13.6	SDR11
50	√	√	√	√
63	√	√	√	√
75	√	√	√	√
90	√	√	√	√
110	√	√	√	√
125	√	√	√	√
140	√	√	√	√
160	√	√	√	√
200	√	√	√	√
225	√	√	√	√
250	√	√	√	√
315	√	√	√	√
355	√	√	√	√
400	√	√	√	√
450	√	√	√	√
500	√	√	√	√
560	√	√	√	
630	√	√	√	

Note: This connection method is applicable for polyethylene pipe connection and polyethylene wear-resistant composite pipe connection.

PVC PIPE SYSTEM IN UNDERGROUND COAL MINE

PRODUCT PRESENTATION



Compared with the traditional cast iron metal pipes, the PVC pipes used in underground coal mine have light weight, easy to install, corrosion resistance, long service life and conveying fluid resistance. Small, cheap, reliable safety performance and other advantages, can be widely used in coal mine gas drainage, positive pressure ventilation, negative pressure ventilation, water supply drainage and grouting and other uses.

PRODUCT MIX



Polyvinyl chloride pipe used in coal mine is sanitary grade polyvinyl chloride (PVC) resin as the main raw material, adding the appropriate amount of stabilizer, anti static agent, lubricant, filler, color agent and other by plastic extruder extrusion molding, through cooling, curing, finalization, inspection, packaging and other processes to complete the production of pipe.

PRODUCT EXECUTION STANDARDS

MT 181-88	《Code for Safety Performance Inspection of Plastic Pipe in Coal Mine》
MT 558.2-2005	《Plastic pipes for underground coal Mine-Part 2: Polyvinyl chloride pipe》
AQ 1071-2009	《Safety Technical Requirements for Non-metallic Gas Transportation Pipe in Coal Mine》

SIZE OF PRODUCT

OD dn/mm	PN/MPa				
	0.6	0.8	1.0	1.25	1.6
	MIN en/mm				
25	—	—	—	2.0	2.3
32	—	—	—	2.3	2.9
40	—	2.0	2.4	2.9	3.6
50	—	2.4	2.9	3.6	4.5
63	2.3	3.0	3.7	4.6	5.7
75	2.7	3.6	4.4	5.4	6.8
90	3.2	4.3	5.3	8.0	8.2
110	4.0	5.3	6.5	9.0	10.0
125	4.5	6.0	7.4	6.5	11.4
140	5.0	6.7	8.2	10.1	12.7
160	5.8	7.7	9.4	11.6	14.5
180	6.5	8.6	10.6	13.0	16.4
200	7.2	9.5	11.8	14.5	18.2
225	8.1	10.7	13.2	16.3	20.4
250	9.1	11.9	14.7	18.1	22.7

PRODUCT PROPERTY

mechanical property

Serial number	item	index
1	Flat performance	1 / 2 of the outer diameter without crack and damage.
	tensile strength, MPa	≥35
2	Drop hammer impact	According to MT558.2-2005 test conditions, 9 of 10 specimens should be free of cracks and damage
3	Pressure resistance	according to MT558.2-2005 test conditions, pressure for 100h without crack and damage
4	sheet resistance	Supply and drainage pipe: the outer wall meter and the arithmetic mean value of resistance should not be greater than $10 \times 10^9 \Omega$
		Positive pressure duct: the outer wall surface and the resistance arithmetic average should not be greater than $10 \times 10^8 \Omega$
		Sprouting pipe: the inner and outer wall surface and the arithmetic mean value of resistance should not be greater than $10 \times 10^8 \Omega$
		Negative pressure duct: inner and outer wall surface and the arithmetic mean of resistance should not be greater than $10 \times 10^6 \Omega$
5	Alcohol spray lamp burning	The arithmetic mean of the flame combustion time of the six samples shall not be greater than 3s, and the flame combustion time of any specimen shall not be greater than 10s.
		The arithmetic mean of the flameless combustion time of the 6 specimens shall not be greater than 20s, and the flameless combustion time of any specimen shall not be greater than 60s.

SUPPORTING CONNECTION FITTINGS

The pipe connection mode can be installed in various ways, such as expansion port bearing connection, flange connection and wire buckle connection. It may also be connected to other types of pipe materials such as cast iron pipes by flanges or other suitable adapters.

PERFORMANCE FEATURES

The PVC pipeline for underground coal mine has excellent and stable permanent flame retardant and antistatic performance. The PVC pipeline for coal mine is another domestic PVC pipeline. The new development direction, its promotion and use will certainly bring a strong promotion effect for the development of coal mine and other fields. Its outstanding performance advantages are as follows:



Permanent flame-retardant and anti static properties

PVC The molecular activity is low, itself has a flame retardant. Its anti-static and flame retardant performance exceeds the technical parameters stipulated in MT558.2-2005 standard, and the dual resistance performance is constant and durable, and its anti static and safety performance is far better than that of coating and adhesive pipes. There will not produce sparks caused by collision, and can guarantee underground safety.



Corrosion resistance, cost-effective, long service life

Corrosion resistance, no scaling, long service life, maintenance free, save the cost of later anti corrosion and scaling, the life is much higher than the steel pipe, the comprehensive benefit is 6-8 times that of the steel pipe.



High strength, easy to remove and assemble

The density is small, the unit weight is only 20% of the steel pipe, 30% of the glass pipe, the disassembly and installation is convenient, can greatly reduce the labor intensity, save a lot of installation costs and time.



Pipeline conveying fluid resistance is small

The pipe has self-lubricating, non-scaling, smooth internal and external walls, small fluid resistance, especially suitable for underground transportation of high sulfur, calcium, magnesium and plasma water quality.



Light in weight and easy to carry

The specific gravity is only 1 / 6 of the steel pipe, which is easy to transport, install, refit and dismantle. It can be installed in various ways, such as expanded port bearing connection, flange connection and wire buckle connection, which can save a lot of construction and installation time and economic cost.



POLYETHYLENE PIPE SYSTEM FOR MINE

ENGINEERING PIPELINE, MADE BY DONGHONG

The coated composite steel pipe is made of steel pipe as the base pipe, thermal setting epoxy resin powder and polyethylene as the coating material, and is made by thermal processing and coating process. Plastic coated composite steel pipe integrates the superior mechanical properties of steel and the superior chemical corrosion resistance of polymer materials, greatly extends the service life of steel pipe, with corrosion resistance, not easy to scale, high pressure superior performance, is a new type of anti-corrosion pipeline.

EPOXY RESIN / POLYETHYLENE COATED COMPOSITE STEEL PIPE USED IN UNDERGROUND COAL MINE

PRODUCT MIX



Working steel pipe: seamless steel pipe, straight seam steel pipe and spiral steel pipe as the base pipe, play the main pressure role.

Internal corrosion layer: the molten epoxy powder is generally used as the internal corrosion layer, because the epoxy resin coating has strong adhesion, is not easy to fall off, smooth surface, not easy to scale to improve the delivery efficiency.

External preservative layer: preservative layer of molten epoxy powder, polyethylene powder or other materials.

PRODUCT EXECUTION STANDARDS

MT181-1988 《Code for Safety Performance Inspection of Plastic Pipe used in Underground Coal Mine》

CJ/T 120-2016 《Plastic-coated composite steel pipe for water supply》

SIZE OF PRODUCT

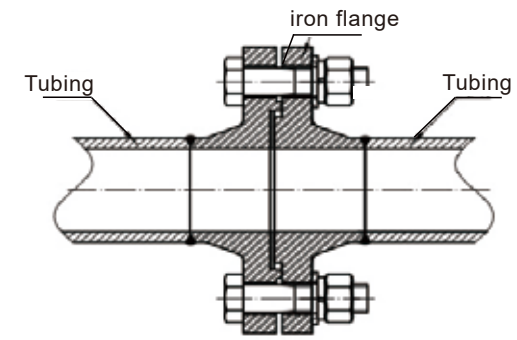
OD DN/mm	Internal coating δ /mm		Topcoat δ /mm			
	Polyethylene	epoxy resin	Polyethylene		epoxy resin	
40	> 0.4	> 0.3	> 0.6	> 0.8	> 0.3	> 0.35
50						
65						
80	> 0.5	> 0.35	> 0.8	> 1.0	> 0.35	> 0.4
100						
125						
150						
200	> 0.6			> 1.2		
250						
300						
350	/	> 0.4	> 1.0	> 1.3	> 0.4	> 0.45
400						
450	/	> 0.4	> 1.0	> 1.3	> 0.4	> 0.45
500						
600						
700		> 0.45	> 1.2	> 1.8		
800						
900						
1000						
1100	> 0.45	> 1.2	> 1.8	> 0.4	> 0.45	
1200						

Note: Except for the special requirements, the coating thickness follows the general grade standard requirements.

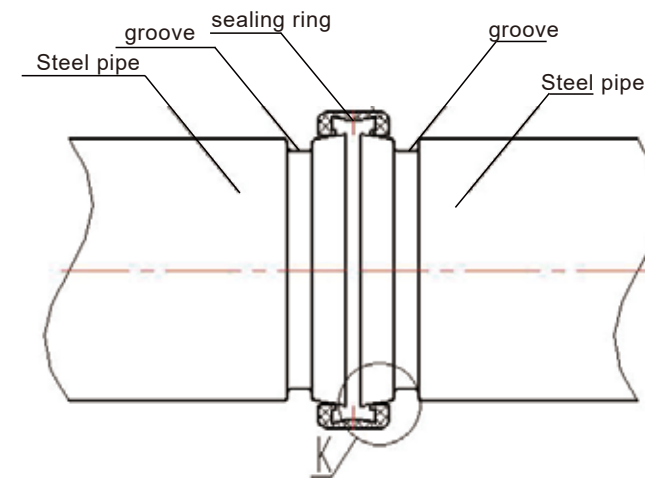
PRODUCT PROPERTY

Serial number	item	requirement
1	Needlehole test	electric spark detector detection, no electric spark generation
2	Adhesion	polyethylene coating of 30N / cm
		Epoxy resin coating of grade≥3
3	Bending properties	No crack or peeling of the coating
4	Flating properties	No crack or peeling of the coating
5	Impact performance	No crack or peeling of the coating
6	Surface resistance	$\leq 1 \times 10^6$

Bump butt welding flange connection

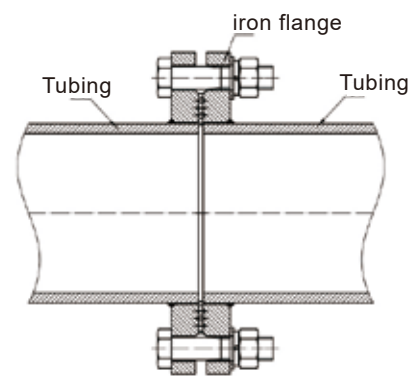


Hoop connection



PRODUCT CONNECTION MODE

Plate-type flat welding flange connection



Specification and model;
DN50mm ~ DN200mm

pressure grade:
1.0MPa ~ 4.0MPa

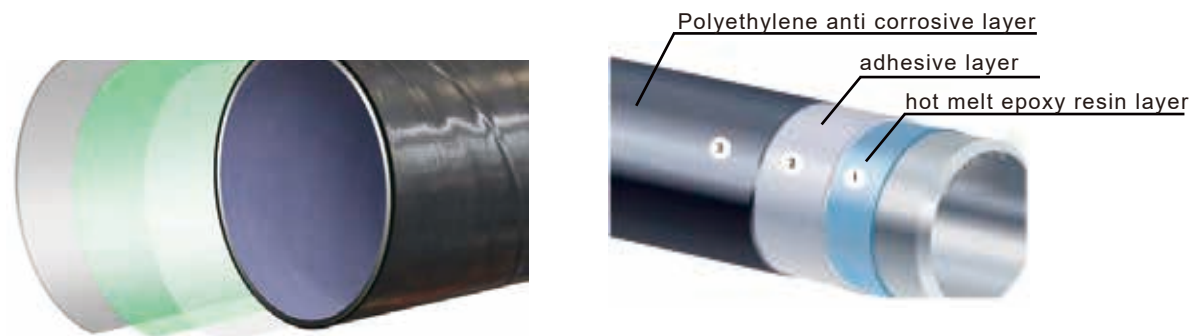
COATED COMPOSITE STEEL PIPE FOR UNDERGROUND COAL MINE (THREE-LAYER STRUCTURE POLYETHYLENE OF OUTER WALL)

PRODUCT PROFILE

Coated composite steel pipe for underground coal mine is a kind of anticorrosive steel pipe products, in the overall steel pipe anticorrosion system, its anticorrosion performance, three structure, hot melt epoxy resin layer, adhesive layer, polyethylene anticorrosion layer, based on three structure design has strong corrosion resistance, high stripping strength, impact resistance, long life; epoxy resin coating with excellent adhesion is used to improve the anti-corrosion performance and delivery efficiency.

The product strengthens the anti-corrosion and anti-external impact ability of the outer wall of the steel pipe, and combined with the excellent anti-corrosion and conveying effect of the inner layer design, is an ideal anti-corrosion pipeline product type, the products are generally connected by flange, can be widely used in coal mine underground water supply and drainage, positive and negative pressure wind, gas drainage, grouting and other pipelines.

PRODUCT MIX



External anti corrosion layer: using three layers of structure anti corrosion, in which the hot melt epoxy resin layer plays the role of enhancing adhesion, the adhesive layer binds the nonpolar polyethylene layer with the hot melt epoxy resin layer, the polyethylene layer is the largest proportion of thick wall, the three materials have independent modification technology.

Internal corrosion coating: using hot melt epoxy resin coating, the coating has strong adhesion, corrosion resistance, strong conveying capacity.

Steel pipe: high mechanical strength, strong pressure capacity, high safety and stability.

SIZE OF PRODUCT

OD D N / m m	Inner coating/mm	outer coating / m m			
	epoxy resin	epoxy resin	adhesive layer	polyethylene preservative layer	
				ordinary grade	reinforcing grade
40	> 0.3			1.8	2.5
50					
65					
80	> 0.35	≥ 0.12		2	2.7
100					
125					
150					
200					
250					
300	> 0.4		≥ 0.17	2.2	2.9
350					
400					
450					
500					
600	> 0.45			2.5	3.2
700					
800					
900					
1000					
1100					
1200		≥ 0.15		3	3.7
1400					
1500					
1600					
				3.3	4.2

PRODUCT IMPLEMENTATION STANDARDS

MT 181-88	《Code for Safety Performance Inspection of Plastic Pipe in Coal Mine》
GB/T 23257-2017	《Buried Steel Pipe》
CJ/T 120-2016	《Plastic-coated composite steel pipe for water supply》

PRODUCT PERFORMANCE INDICATORS

item	index
Flashing test	press to 4 / 5 of the outer diameter of the pipe, the inner coating without crack or stripping
Bending experiment	≤DN50,8 times outer diameter bending, no crack or stripping of inner coating
Drop hammer impact	no crack or peel, specifically implement the requirements of Table 7 of CJ / T120-2016
Adhesion	Outer wall: 100N / cm at 2 0°C and 70N / cm at 6 0°C
	Inner wall:the adhesion is not less than level 3
sheet resistance,Ω	Water supply and drainage pipe: the average arithmetic resistance of the outer wall surface should not be greater than 1.0×10^9
	Positive pressure duct: the arithmetic mean resistance of inner and outer wall surfaces shall not be greater than 1.0×10^8
	Spray pipe: the arithmetic average of resistance of inner and outer wall surface shall not be greater than 1.0×10^8
	Pipe for gas drainage: the arithmetic mean value of the surface resistance of the inner and outer walls shall not be greater than 1.0×10^8
Alcohol spray lamp burning	Negative pressure duct: the arithmetic average resistance of inner and outer walls shall not be greater than 1.0×10^8
	The arithmetic mean of the burning time of the 6 samples shall not be greater than 3s, and the burning time of any sample shall not be greater than 10s
Alcohol spray lamp burning	The arithmetic mean of the flaming combustion time of the 6 samples shall not be greater than 20s, and the unflaming combustion time of any sample shall not be greater than 60s

ANTI CORROSIVE STEEL PIPE FITTINGS PRODUCT SERIES

PRODUCT PRESENTATION



The products are designed and manufactured according to GB / T 12459-2017 Steel Pipe Type and Types and 02S403 atlas and enterprise standard size. The pipe fittings are processed in steel-plastic composite form, and the anticorrosion layer is coated with epoxy resin powder to ensure the safety and long-term use of the pipe system.

PRODUCT EXECUTION STANDARDS

CJ/T 120-2016	《Plastic-coated composite steel pipe for water supply》
GB/T 12459-2017	《Type and Parameters of Steel Counter welded Pipe Parts》

REINFORCEMENT REINFORCEMENT SPIRAL WELDED STEEL PIPE (SPIRAL WELDED CORRUGATED STEEL PIPE PRODUCTS)

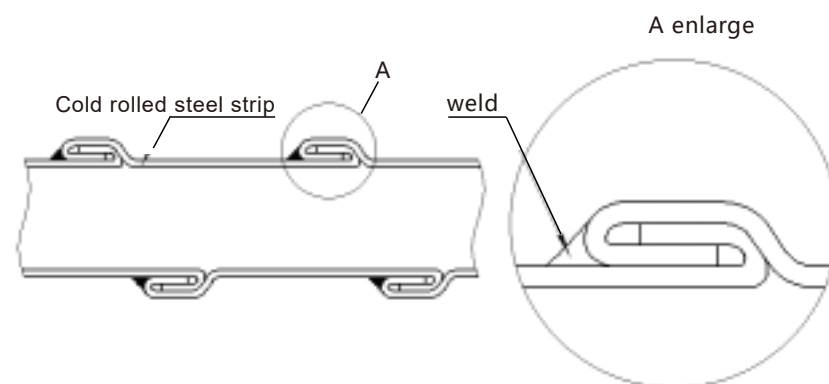
PRODUCT PRESENTATION



The reinforced reinforcement spiral welded steel pipe is a special pipe independently developed by our company for gas drainage in underground coal mine, which is compared with the traditional gas drainage steel pipe with the advantages of light weight, high ring stiffness and corrosion resistance, it reduces the total cost of mining steel pipe construction. The products have been promoted and applied by the company for many years, and are favored by customers extensive use. The product mainly through the structural design, through the unique occlusal structure to enhance the negative pressure resistance of the pipe, reduce the wall thickness of the steel pipe.

The anti-corrosion structure of reinforced spiral welded steel pipe is divided into three types of molten epoxy powder coating, hot dip zinc and stainless steel according to the different needs of customers. Product is the most the large production capacity can achieve DN1000mm, and the 1.5-3.5mm wall thickness can be selected according to the different product models.

PRODUCT STRUCTURE



The product takes cold rolled steel strip or stainless steel strip as the base material, through the spiral forming unit multiple groups of roll rolling, spiral bite forming, automatic welding and other processes processing molding. The inner wall of the formed pipe is smooth, and the outer wall reinforcement reinforcement is composed of four layers of occlusion structure to enhance the weld strength of the product. 45° corner weld welding is conducted at the occlusion structure to ensure the high impact resistance and the compressive strength of the pipe.

Product because of occlusion structure, called occlusion steel pipe, the outer wall is reinforced, also known as reinforced reinforcement spiral welding corrugated steel pipe.

PRODUCT EXECUTION STANDARDS

GB/T 13912-2020 《Technology and Experimental Methods of Hot Dipped Galvanized Steel for Metal Overlay》

MT 181-88 《Code for Safety Performance Inspection of Plastic Pipe in Coal Mine》

CJ/T 120-2016 《Plastic-coated composite steel pipe for water supply》

PRODUCT PERFORMANCE CHARACTERISTICS



重量轻

in light weight

Compared with the same specification of the steel pipe, the weight of the steel pipe saves 50% -150%, the pipe weight is light, reduce the construction labor intensity.



耐腐蚀

corrosion preventive

Molten epoxy powder coating, hot dip zinc and stainless steel, diversified selection can ensure the service life of the pipe.



耐负压

Negative pressure resistance

To meet the negative pressure performance requirements of the pipe for gas drainage, under-0.097MPa pressure, 100h pipe without suction, deformation.



噪音低

Low operating noise

The inner wall of the pipe is a flat wall structure, with the inner wall smooth and low noise during normal operation.



涂层附着力强

The coating has strong adhesion

The selection of anti-corrosion materials are the national standard mature technology type, the use of the process does not fall off, peeling phenomenon.



输送效率高

High delivery efficiency

The anti-corrosion structure has smooth surface and low roughness, which reduces the transportation energy consumption.



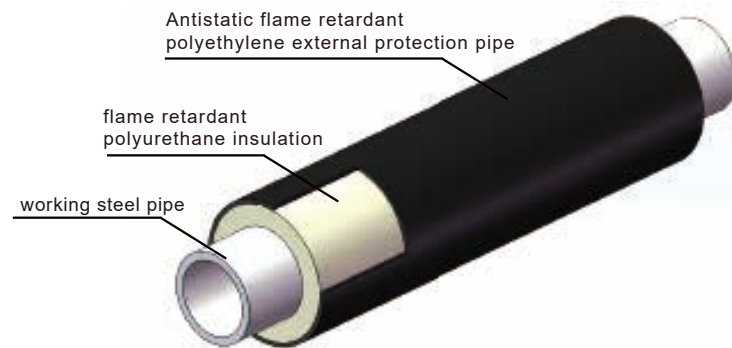
INSULATION PIPE SYSTEM FOR MINE

BE THE WORLD'S SAFEST AND MOST PERMANENT PIPELINE ART

Polyurethane thermal insulation pipe, which saves energy, reduces the cost, shortens the construction cycle and protects the environment, has significant social and economic benefits, and has been widely used in the urban central heating pipe network. With the development and progress of industrial and mining industry, the demand for insulation pipe is also increasing day by day, especially the requirements of underground coal mine insulation pipe including insulation, safety, impact, flame resistance and antistatic and other special indicators. Polyurethane thermal insulation pipe, which saves energy, reduces the cost, shortens the construction cycle and protects the environment, has significant social and economic benefits, and has been widely used in the urban central heating pipe network. With the development and progress of industrial and mining industry, the demand for insulation pipe is also increasing day by day, especially the requirements of underground coal mine insulation pipe including insulation, safety, impact, flame resistance and antistatic and other special indicators.

POLYURETHANE SHEATH POLYURETHANE INSULATION STEEL PIPE FOR UNDERGROUND COAL MINE

PRODUCT MIX



Working steel pipe: seamless steel pipe, spiral welded pipe, straight seam welded pipe; before thermal insulation, the mechanical rust removal level is not lower than GB / T8923.1 Sa level 2.5 level in.

Slepipe: the special modified flame retardant and anti static polyethylene resin is processed by single screw extrusion machine, which has the characteristics of good impact resistance, isolation effect and corrosion resistance.

Polyurethane insulation layer: using modified flame retardant polyurethane foam by high pressure injection material, fill the gap between the casing and the working steel pipe, play the most important insulation effect, with the characteristics of low thermal conductivity, high compression strength, low water absorption, high closure rate.



PRODUCT EXECUTION STANDARDS

- MT 181-1988 《Code for Safety Performance Inspection of Plastic Pipe in Coal Mine》
- MT 113-1995 《General Test Method and Judgment Rules for Anti static Resistance of Polymer Products in Coal Mine》
- GB/T 29047-2012 《High-density polyethylene outer tube rigid polyurethane foam prefabricated directly buried insulation pipe and pipe fittings》

SIZE OF PRODUCT

Performance of outer guard pipe pipe			
Outer diameter, mm	min wall thickness	Outer diameter, mm	min wall thickness
90	3.0	365	7.2
110	3.0	400	7.8
125	3.0	420	8.0
140	3.0	450	8.8
160	3.0	500	9.8
180	3.5	550	10.8
200	3.9	560	11.0
225	4.4	600	11.7
250	4.9	630	12.3
280	5.4	655	12.8
315	5.4	710	13.5
325	6.4	760	13.9
335	6.6	850	15.7
355	7.0	955	17.6

PRODUCT PRORETY

Performance of outer guard pipe

Serial number	item	index
1	Density, kg /m ³	≥ 940
2	fracture elongation, %	≥ 300
3	average external surface resistance, Ω	≤ 1.0 × 10 ⁹
4	combustion performance of alcohol blowtorch	The average combustion time is 3s The maximum combustion time is 10s The flameless combustion time was averaged for 20s The flameless combustion time was averaged for 60s
5	longitudinal retraction rate, %	Should not be greater than 3%, the pipe surface should not appear cracks, holes, bubbles and other defects.

Insulation layer polyurethane performance

Serial number	item	index
1	Density	≥ 60kg/m ³
2	thermal conductivity	In the 50°C state, λ 50 should not be greater than 0.033 [w / (m * k)]
3	rate of closed hole	≥ 90 %
4	Burning test of alcohol spraytorch of polyurethane insulation layer	Requirements for combustion test of alcohol blowlamp for polyurethane insulation layer: (A) The arithmetic mean of the burning time of 6 specimens is not more than 3s, and the single value of the burning time of each specimen is not more than 10s; (B) The arithmetic mean of the flameless combustion time of 6 specimens shall not be greater than 10s, and the single value of the flameless combustion time of each specimen shall not be greater than 30s; (c) After the combustion specimen, the flame extension length shall not be greater than 280mm
5	Burning test of alcohol spraytorch of polyurethane insulation layer	Requirements for combustion test of alcohol blowlamp for polyurethane insulation layer: (A) The arithmetic mean of the burning time of 6 specimens is not more than 6s, and the single value of the burning time of each specimen is not more than 12s; (B) The arithmetic mean value of the flameless combustion time of the 6 specimens shall not be more than 20s, and the single value of the flameless combustion time of each specimen shall not be more than 60s; (c) After the combustion specimen, the flame extension length is not greater than 250mm wire mesh skeleton polyethylene compound screw welding

Cooperative Partiner





Global Customers 全球客户

Customer = Success

客户=成功

Motivated by the customer's demand, we provide good use of all the advantages of the whole industry and provides all the customers with the most suitable solutions, varying from the development of raw material to the adjustment of the technic, with the aim of providing great value for the customers.

东宏管业，以客户需求为源动力，从原料研发到工艺调整，充分发挥全产业化优势，为客户提供定制化的管道解决方案，为客户创造更大价值。

战略合作伙伴

Strategic partners

排名不分先后

- 国家能源集团宁夏煤业有限责任公司
- 国家能源集团乌海能源有限责任公司
- 宁夏煤炭基本建设有限公司
- 神华北电胜利能源有限公司
- 中铝宁夏能源集团有限公司
- 中国石化长城能源化工(宁夏)有限公司
- 内蒙古汇能煤电集团有限公司
- 山东能源集团有限公司
- 华亭煤业集团新窑煤矿有限责任公司
- 华能庆阳煤电有限责任公司核桃峪煤矿
- 中煤第三建设(集团)有限责任公司三十六工程处
- 陕西旬邑县旬东煤业有限责任公司
- 旬邑县中达燕家河煤矿有限公司
- 陕西世恒科工贸有限公司
- 西安市建筑工程总公司
- 陕西陕煤铜川矿业有限公司玉华煤矿
- 陕西建新煤化工有限责任公司
- 陕西华电榆横煤电有限责任公司
- 神木县隆德矿业有限责任公司
- 陕西榆林能源集团郭家滩矿业有限公司
- 榆林市华瑞郝家梁矿业有限公司
- 陕西延长石油集团横山魏墙煤业有限公司
- 陕西有色榆林煤业有限公司
- 神木汇森凉水井矿业有限责任公司
- 榆林市榆阳区方家畔煤业有限公司
- 陕西延长石油巴拉素煤业有限公司
- 陕西煤业物资榆通有限责任公司
- 神木县嘉元煤业集团有限责任公司
- 陕西煤业化工建设(集团)有限公司路桥分公司
- 陕西煤业机电安装有限公司
- 陕西煤业化工建设(集团)有限公司洗选煤运营分公司
- 陕西榆林陕煤建设有限公司
- 陕西中盛天然气有限公司
- 陕西煤业物资有限责任公司彬长分公司
- 陕西煤业化工物资集团有限公司彬长分公司
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- SABIC Asia Pacific Pte Ltd
- Basell Asia Pacific Ltd
- Borouge Pte Ltd
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