

SYSTEMS PIPELINE HIGH-PRESSURE



Applications of the systems pipeline high-pressure



Systems pipeline high-pressure (STV) intended for transportation of oil under pressure, gas, water, methanol, abrasive media and etc.

These pipelines are applicable to:

- shallow water and marshlands;
- lakes and rivers;
- coastal waters (shelves) - maximum depth before 100 meters;
- challenging landscapes - highlands, forests, deserts.

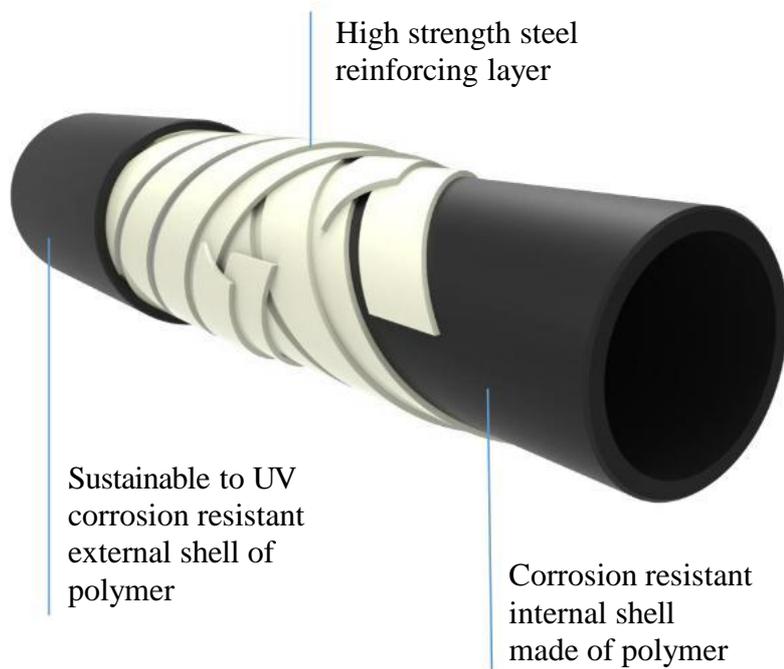
Pipeline installation methods:

- trench gasket;
- ground gasket;
- overhead laying;
- underwater gasket;
- laying by sanitation method.

On today's day possible supply systems pipeline high-pressure from conditional internal diameter from 50 before 200 mm, conditional workers pressure 4.0; 10.0; 21.0; 25.0 MPa and working temperature before + 105 ° C. Data pipelines may be equipped with thermal insulation layer, electric heating system...

STV design (basic version)

STV - this is system pipeline high-pressure multilayer structures, consisting of polymer layers, reinforced metal high-strength materials.



Inner diameters DN, mm	50-200
Working pressure PN, MPa	4.0-21.0
Working temperature, ° C	-60 ... + 60 *
Working temperature, ° C	-60 ... +80 **

* When application in quality polymer for shells of the base material - polyethylene.

** When application in quality polymer for shells - heat-resistant polyethylene.



DN 50, mm	DN 80, mm	DN 100, mm	DN 150, mm	DN 200, mm
The most demanded (common) standard sizes of pipelines				

STV (basic version)

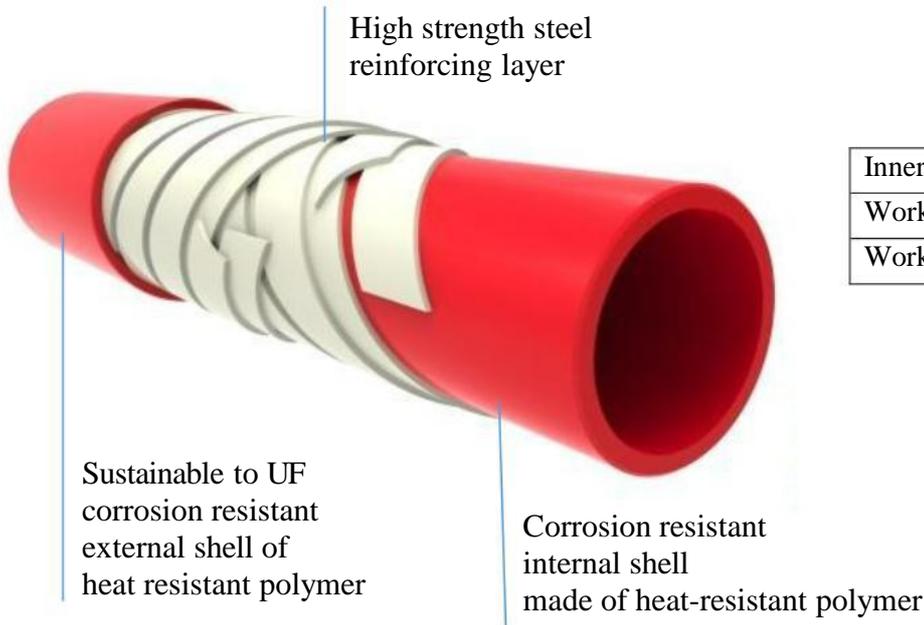
Table standard sizes and technical characteristics of the pipe

Name	Min. radius bending	Int. diameter	Nar. diameter	Weig ht	Max. builder-length	Weight Max. builds. length with Tare	Max. working pace.
	m	mm	mm	kg / km	m	Kg	° C
STV 50 / 75-4	0.75	50	75	4,200	1200	6 150	-60 ... + 80
STV 50/75-10	0.75	50	75	5400	1200	7 600	
STV 50/75-21	0.75	50	75	6500	1100	8 250	
STV 65 / 85-4	0.8	65	85	4900	1150	6750	-60 ... + 80
STV 65/90-10	0.8	65	90	6400	1150	8 500	
STV 65/90-21	0.8	65	90	7 800	1000	8,900	
STV 80/105-4	0.9	80	105	6400	1100	8 150	-60 ... + 80
STV 80/105-10	0.9	80	105	8 100	1100	10,000	
STV 80/110-21	0.9	80	110	9 800	1000	10,900	
STV 100 / 125-4	1.15	100	125	8,000	700	6,700	-60 ... + 80
STV 100/125-10	1.15	100	125	12 300	700	9750	
STV 100/130-21	1.15	100	130	14,400	700	eleven 200	
STV 125 / 155-4	1,2	125	155	13 100	400	6 350	-60 ... + 80
STV 125/160-10	1,2	125	160	15 800	400	7 450	
STV 125/165-21	1,2	125	165	21150	350	8 500	
STV 140/175-4	1.6	140	175	16 300	200	4350	-60 ... + 80
STV 140/180-10	1.6	140	180	22300	200	5600	
STV 140/190-21	1.6	140	190	29,500	200	7,000	
STV 160/200-4	1.8	160	200	18,900	180	5 100	-60 ... + 80
STV 160/200-10	1.8	160	200	28,900	180	6,700	
STV 180/220-4	2.0	180	220	24400	130	4,700	-60 ... + 80
STV 180/225-10	2.0	180	225	35600	130	6,200	
STV 200/245-4	2,3	200	245	30,000	100	4,500	-60 ... + 80
STV 200/250-10	2,3	200	250	42,500	100	5800	
STV 50/80-25	0.75	50	80	6 800	1100	8550	-60 ... + 80

Data pipelines may be additionally equipped with heat insulating layer, system electric heating. The most detailed information can be find out on website www.nordwestvl.com

STV design (heat-resistant design)

STV - this is system pipeline high-pressure multilayer structures, consisting of heat-resistant polymer layers, reinforced metal high-strength materials.



Inner diameters DN, mm	50-200
Working pressure PN, MPa	4.0-21.0
Working temperature, ° C	-60 ... + 105

Advanced software capabilities compared with the basic version of the STV



Steam piping



Lack of gas permeability polymer



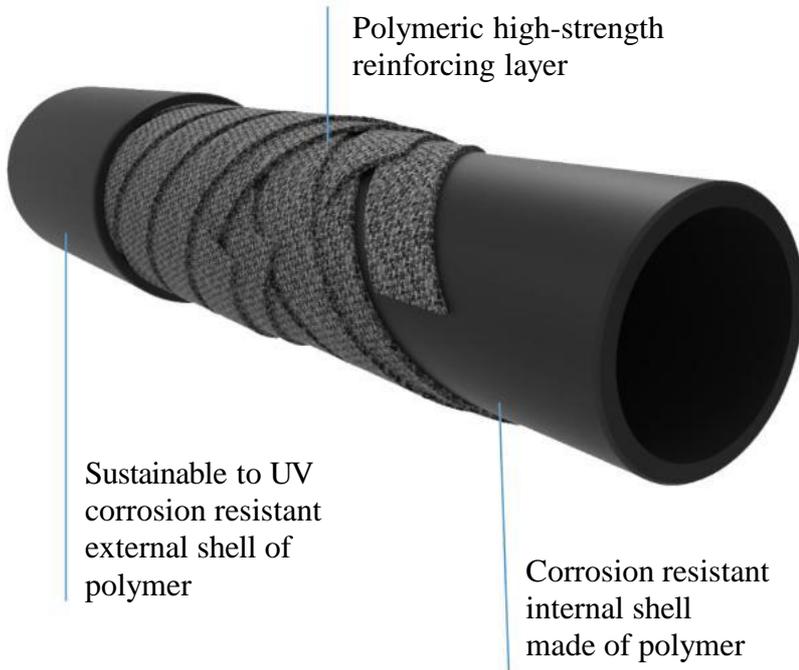
Flushing the pipeline hot solutions



Heating oil by Travel heaters up to + 95°C

STV design (for highly aggressive environments)

STV - this is system pipeline high-pressure multilayer structures, consisting of polymer layers, reinforced polymeric high-strength materials.



Inner diameters DN, mm	50-200
Working pressure PN, MPa	4.0-10.0
Working temperature, ° C	-60 ... + 60 *
Working temperature, ° C	-60 ... + 105**

* When application in quality polymer for base material shells - polyethylene.

** When application in quality polymer for polymer shells of heat-resistant performance.

Advanced software capabilities compared with the basic version of the CTV

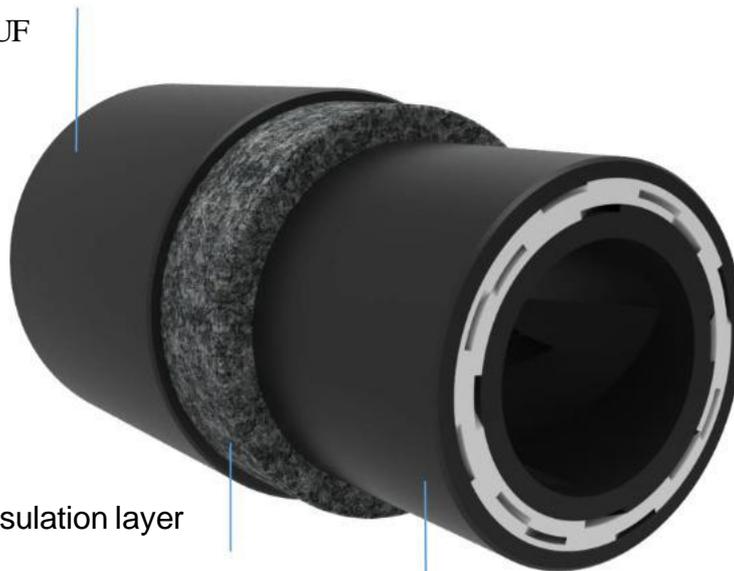
IN difference from basic constructions by pipelines given type allowed pump over mined products from content hydrogen sulfide in channel pipeline at partial pressure over 0,005 MPa, and also dr. highly aggressive environments.

Systems pipeline high-pressure from heat insulating layer

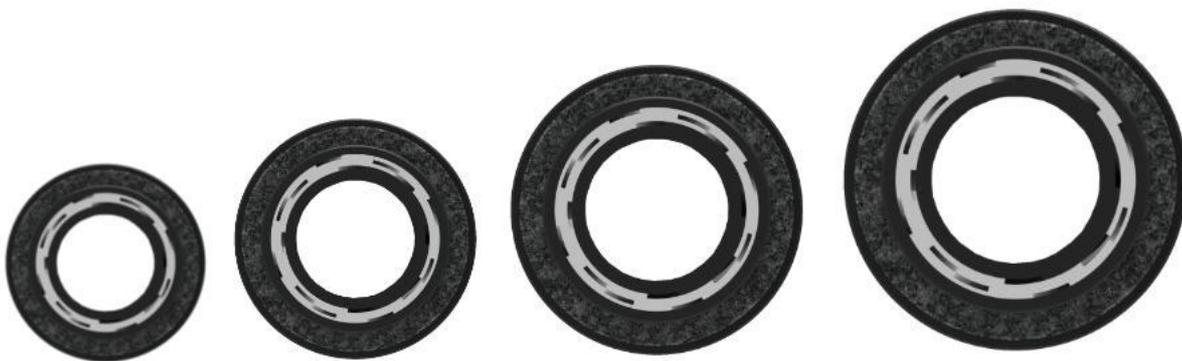
Sustainable to UF corrosion resistant external shell

Thermal insulation layer

STV basic execution

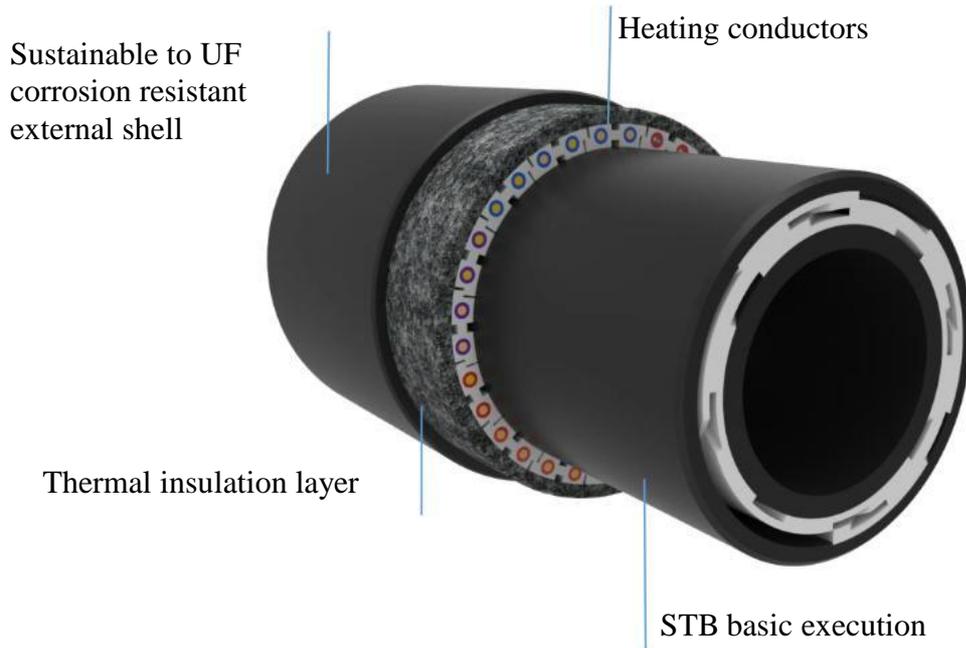


Inner diameters Du, mm	50-150
Working pressure PN, MPa	4.0-21.0
Working temperature, ° C	-60 ... + 80

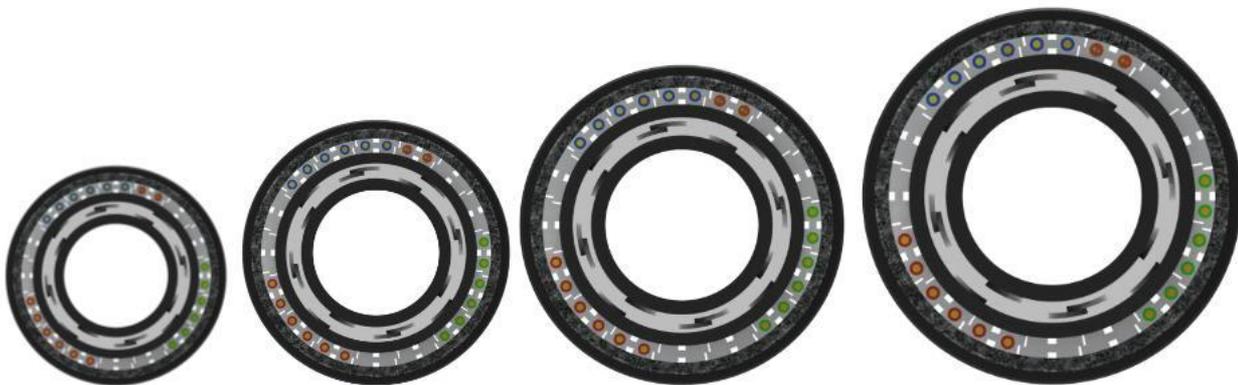


DN 50, mm	DN 80, mm	DN 100, mm	DN 150, mm
The most demanded (common) standard sizes pipelines			

Systems pipeline high-pressure from electrically heated and additional heat insulating layer allows totally compensate heat losses of the pumped-over liquids into the environment...



Inner diameters Du, mm	50-150
Working pressure PN, MPa	4.0-21.0
Working temperature, ° C	-60 ... + 80



DN 50, mm	DN 80, mm	DN 100, mm	DN 150, mm
The most demanded (common) standard sizes pipelines			

Fittings for STV installation

Selected segments pipeline connect through metal fittings various designs.

Flange fitting

Bolted connection
Sealing the elements



Symmetrical fitting

Connections segments
pipes



Fitting under welding

Welded to standard elements
pipeline and standard piping
fittings



Ways of connecting fittings during the installation of STV

Fitting intended as for connections segments pipes between by yourself, So and for connection of CTB to steel pipeline and other equipment.



Delivery to consumer

STV supplied on metal drums. Before places installations her can deliver by road, rail, sea transport.



Product quality

On production introduced system management quality GOST R ISO 9001-2015. All issued production certified and It has certificate compliance. Constructions pipelines developed according to requirements international standards on flexible pipes - API 17J, API 15S.



Check quality held on of all stages manufacturing, starting out from input control materials, of which manufactured systems pipe high-pressure (controlled options given in table 1), check held on conformity declared manufacturer's material specifications.

Table 1

No.	Type of material	Test type							
		Check conformity I'm external kind	Density	Index fluidity melt (PTR)	Limit strength at stretching	Definition limit fluidity at stretching	Relatively e lengthening at break	Chemical composition	Geometric not dimensions
1.	Polymer materials	+	+	+	+	-	+	-	-
2.	Metal materials	+	-	-	+	+	+	+	+

IN process making designated control points for checks quality making on of all operations. IN check interoperative control are included check technological modes (temperature, pressure and etc.), check geometric sizes, check specific features of making similar products.

All shipped ready production It has 100 % control quality, those. everything drums from pipe checked internal hydrostatic pressure 1,3xRrab. in flow 2-x hours, what confirmed attached protocol hydrostatic tests. Data trials may pass in presence Customer, or in presence third parties, representing interests of the Customer (auditor).

Every 2 of the year on enterprise pass qualifying trials issued products, on which confirmed declared in Technical conditions strength characteristics (the list of tests is given in table 2):

Table 2

No.	Execution pipeline	Test type						the confirmation minimum bending radius
		Working internal pressure	Working external pressure	Destructively e internal pressure	Destructively e external pressure	Working stretching th load	Destructive stretching load	
1.	Ground	+	-	+	-	+	+	+
2.	Marine	+	+	+	+	+	+	+



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