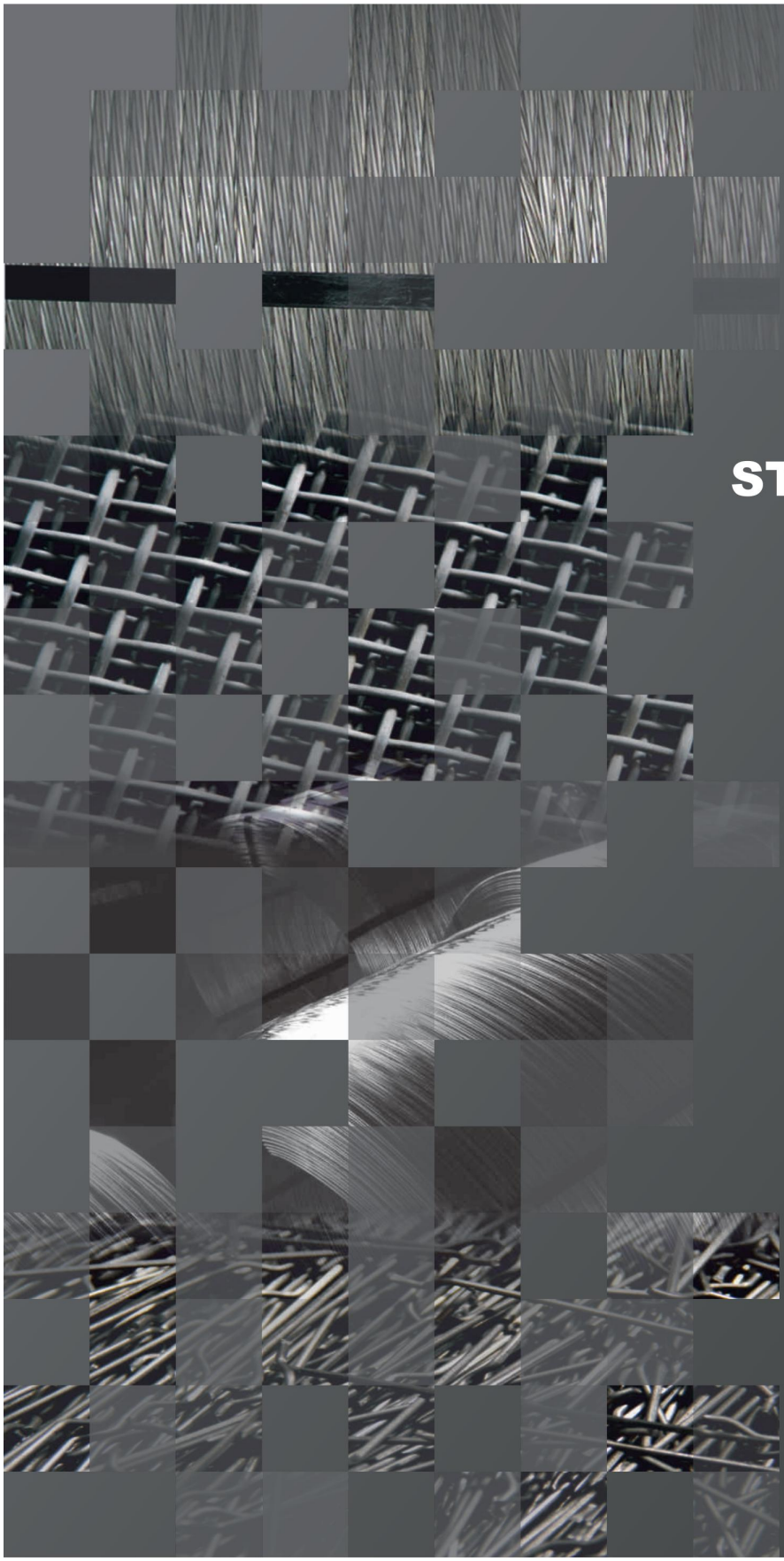


STALKANATSILUR

STEEL WIRE

PC STRANDS

STEEL FIBER

STEEL MESH

ISO 9001
BUREAU VERITAS
Certification

Dear partners and colleagues!

We thank you for interest to our company.
Private Joint-Stock Company «Production Association «STALKANAT-SILUR»,
Odessa is the largest enterprise in Ukraine produced metalware goods.
The purpose of enterprise creation is effective sales of metalware goods by providing to the customers of the first-rate quality goods, high service and flexible terms of payment.

The main competitive advantages PJSC «PA «STALKANAT-SILUR»:
- wide list of goods;
- high quality of service;
- efficient and secured terms of delivery;
- availability of product assortment on warehouses;
- delivery of various product types per lot;
- flexible terms of payment;
- technical assistance.

The mission of company – to assist the development of customers business, providing them high-quality and wide assortment of metalware goods (steel ropes, wire, fiber, mesh, strands) and giving the complex of attendant service which meets customers request.

The priority task of company is the development of stock network – «service-centers» – on the territory of Ukraine for approaching the goods to end customers.

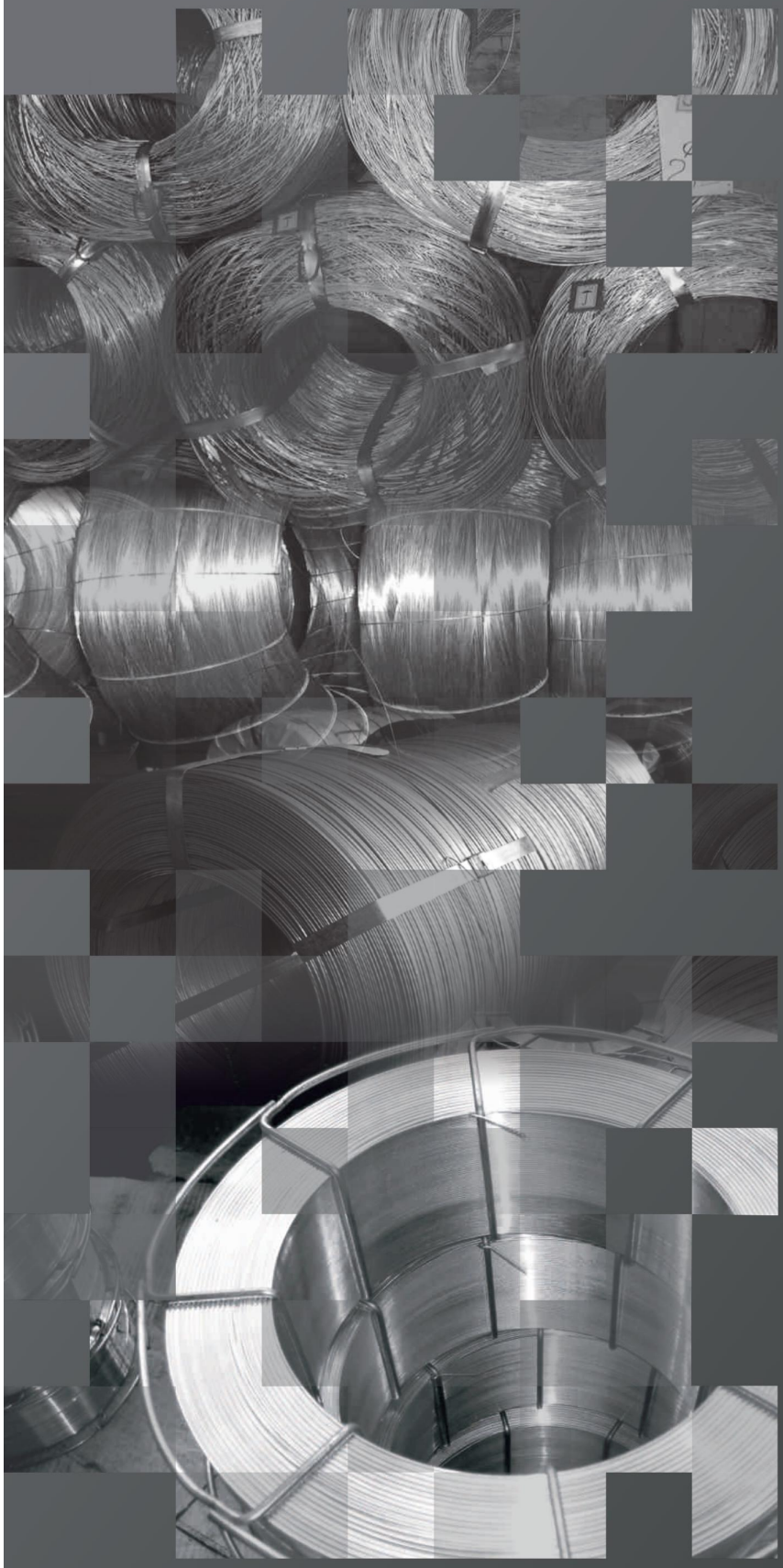
Today we work with wholesale and retail customers; state enterprises, big holdings, enterprises of small and average business, traders are among our customers.

The goods of PJSC «PA «STALKANAT-SILUR» are used in different fields of industry – coal and metal mining industry, gas-and-oil producing industry, metallurgy, transport and agricultural mechanical engineering, building industry, railway transport, power engineering and marine industry.

The geography of our deliveries is wide, we deliver goods to domestic and foreign markets. We're opened for co-operation, the company constantly improves the quality of goods, service for customers, develops new markets and provides stable deliveries to traditional markets.

We hope for your support and successful co-operation.

Contents



STALKANATSILUR

WIRE

COIL Z2

CASSETTE

ROSETTE

COIL

STEEL WIRE

Private Joint-Stock Company «Production Association «STALKANAT-SILUR» offers steel wire of different application by the diameters from 0,30 mm up to 8,00 mm.

Steel wire is manufactured of following types and applications:

- Low carbon steel wire for general purpose;
- Cold drawn low-carbon steel wire for the reinforcement of concrete constructions;
- Cold drawn low-carbon steel wire of shaped profile for the reinforcement of concrete constructions;
- Low carbon wire for industrial meshes;
- Welding steel wire;
- Welding steel wire copper-coated;
- Steel wire for ropes;
- Spring carbon steel wire;
- Carbon steel wire for the reinforcement of the prestressed concrete constructions;
- Carbon steel wire profile shaped for the reinforcement of the prestressed concrete sleepers;
- Zinc-coated steel wire for cores of conductors;
- Steel wire for high-pressure hoses;
- Galvanized middle carbon heat treated wire for binding of cotton bales;
- Heat-treated steel wire for tractors and agricultural machines;
- Carbon wire for meshes;
- Zinc-coated steel wire for the production of cables and conductors;
- Carbon steel wire for cold handling.

The wire is delivered coiled in various variants:

- in coils by weight from 5 up to 150 kg;
- on spools of type BS-60, BP-60S;
- in coils of type Z2, Z3;
- in coils of type «rosette»;
- in coils with weight 500-900 kg;
- on wire welded cassettes;
- on plastic cassettes.

Coil of wire with the weight up to 150 kg is coiled on vertically placed drawing machine. Turns of the wire are layed one on another on the drum and they have the same diameters which are equal to the diameters of winding drum. Coiling is strong.

Coil of the wire with the weight 500-900 kg is coiled on horizontally placed metal sectional reel. Coiling has reel laying. Coiling is stronger than coiling in coil.

Coils of Z2, Z3 types have a reel laying of the wire. But it is on inner paper core which is tied up with the wire.

Coils of Rosette type - is a coil of wire, the turns of which are displaced relative to each other and are laid in a certain order and at a certain angle.

Quality management system of factories is certified acc. to the requirements of ISO 9001:2015 by «Bureau Veritas Certification».

LOW CARBON STEEL WIRE FOR GENERAL PURPOSE GOST 3282-74

APPLICATION:
for production of nails, binding, enclosures, mesh and other purposes.

WIRE DIAMETER:
- from 0,3 mm up to 6,0 mm – without coating;
- from 0,4 mm up to 5,0 mm – galvanized.

TYPE OF TREATMENT:
- without treatment – galwanized and and without coating.
- heat treated – without coating;

By the quantity of zinc on the surface the wire is made:
- galvanized, class 1.

MASS OF COATING:

Diameter, mm	Mass of coating, g/m², min
	class 1
0,40 - 0,50	20
0,50 - 0,80	30
0,85 - 1,00	35
> 1,00 - 1,20 inclusive	40
> 1,20 - 1,60 inclusive	50
> 1,60 - 2,00 inclusive	50
2,20; 2,50	60
2,60	60
2,80	70
> 2,80 - 3,60 inclusive	70
> 3,60 - 5,00 inclusive	80

MECHANICAL PROPERTIES:

Diameter, mm	Tensile strength, N/mm²		
	Without heat treatment galvanized and without coating		Heat treated without coating
	group 1	group 2	
0,30 - 0,45 inclusive	690 - 1370	690 - 1370	290 - 490
> 0,45 - 1,00 inclusive	690 - 1270	690 - 1180	
> 1,00 - 1,20 inclusive	590 - 1270	690 - 1180	
> 1,20 - 2,50 inclusive	590 - 1180	690 - 980	
> 2,50 - 3,20 inclusive	540 - 1080	640 - 930	
> 3,20 - 3,60 inclusive	440 - 930	640 - 930	
> 3,60 - 4,50 inclusive	440 - 930	590 - 880	
> 4,50 - 6,00	390 - 830	490 - 780	

Wire by the diameter:

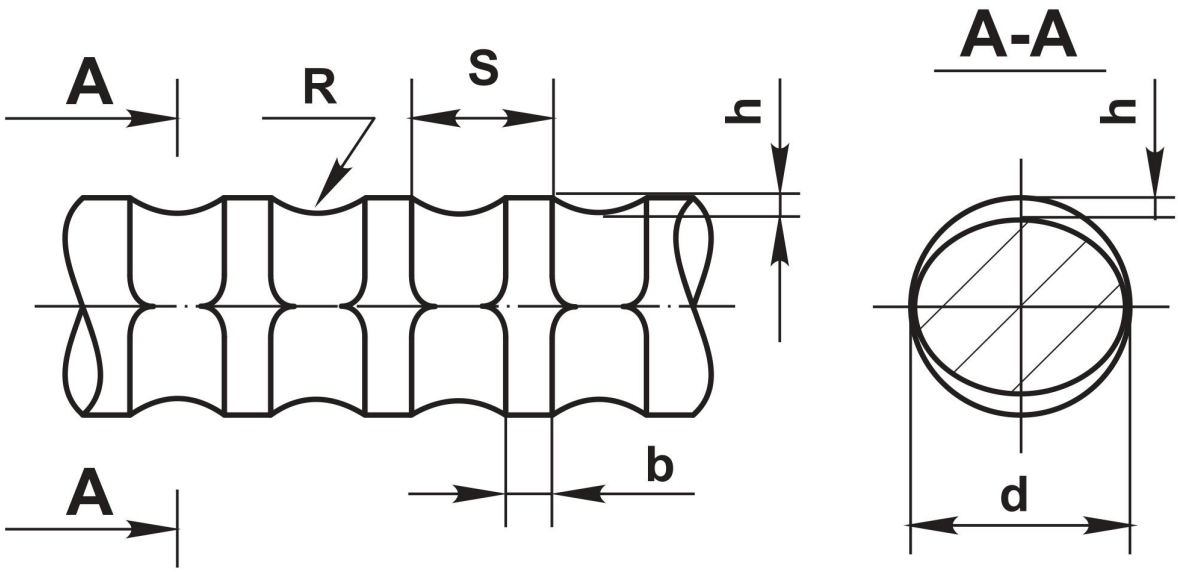
- 0,30-0,50 mm – without heat treatment (galvanized and without coating) is delivered in coils with weight 7-14 kg or on BS-60 and BP-60S spools with weight 16-25 kg;
- 0,60-1,30 mm – without heat treatment (galvanized and without coating) is delivered in coils with weight 60-120 kg;
- 0,50-2.5 mm – without heat treatment (galvanized and without coating) is delivered in coils of type Z2 with weight 400+/-50 kg;
- 1,0-1,4 mm – without heat treatment (galvanized and without coating) is delivered in coils of type Z3 with weight 800-1000 kg;
- 0,7-1,3 mm without coating (head treated and without treatment) and galvanized (without treatment) is delivered in coils with weight 60-100 kg;
- 1,4-6,0 mm without coating (head treated and without treatment) and galvanized (without treatment) is delivered in coils with weight 120-150 kg;
- more than 2,3 mm without coating (head treated and without treatment) and galvanized (without treatment) is delivered in coils with weight 500-900 kg;
- 1,8-4,0 mm without coating (head treated and without treatment) is delivered in coils of type «rosette» with weight 250-800 kg.

COLD DRAWN LOW-CARBON STEEL WIRE FOR THE REINFORCEMENT OF CONCRETE CONSTRUCTIONS GOST 6727-80

APPLICATION:
for the reinforcement of concrete constructions.

WIRE DIAMETER:
3,0; 4,0; 5,0 mm of shaped profile.

TYPE OF SURFACE:
with a shaped profile Bp-1.



MAIN BASIS PARAMETERS AND SIZES OF WIRE:

Diameter, mm	Depth of dents, mm	Ultimate tolerance on the depth of dents, mm	Nominal length of dents, mm	Ultimate tolerance of the length of dents, mm	Length of lug, mm	Ultimate tolerance of the length of lug, mm
3,0	0,15	+0,05 -0,02	2,0	±0,2	0,6	±0,2
4,0	0,20		2,5	±0,2	0,8	±0,2
5,0	0,25		3,0	±0,2	1,0	±0,2

MECHANICAL PROPERTIES:

Diameter, mm	Breaking strength, rH (kgf)	Strength corresponding to the relative yield point $P_{0,2}$, rH (kgf)	Number of bends	Relative elongation on 100 mm, %
3,0	39 (400)	35 (355)	4	2.0
4,0	71 (720)	62 (630)	4	2,5
5.0	108 (1085)	97 (985)	4	3,0

Wire is delivered in coils with weight 500-900 kg.

COLD DRAWN LOW-CARBON STEEL WIRE OF SHAPED PROFILE FOR THE REINFORCEMENT OF CONCRETE CONSTRUCTIONS TU U 24.3-26209430-093:2016

APPLICATION:
for the reinforcement of concrete constructions.

WIRE DIAMETER:
from 2,3 mm up to 5,6 mm.

TYPE OF SURFACE:
with a shaped profile.

TYPE OF COATING:
- without coating;
- zink coating.

MAIN BASIS PARAMETERS AND SIZES OF WIRE:

Nominal diameter, mm	Nominal size, mm	Ultimate tolerance on the size, mm	Depth of dents, mm	Ultimate tolerance on the depth of dents, mm	Nominal length of dents, mm	Ultimate tolerance of the length of dents, mm	Length of lug, mm	Ultimate tolerance of the length of lug, mm
2,30	2,30	+0,03 -0,09	0,09	+0,05 -0,02	2,0	±0,2	0,5	±0,2
2,50	2,50		0,10					
2,60	2,60							
2,65	2,65							
2,70	2,70							
2,80	2,80							
3,00	3,00	+0,04 -0,12	0,15		2,5		0,6	
3,50	3,50		0,20				0,7	
3,60	3,60							
3,70	3,70							
3,80	3,80							
4,00	4,00						0,8	
4,60	4,60	+0,05 -0,15	0,25		3,0		1,0	
4,70	4,70							
4,80	4,80							
5,00	5,00							
5,60	5,60							

MECHANICAL PROPERTIES:

Diameter, mm	Breaking strength, rH (kgf), not less	Strength corresponding to the relative yield point $P_{0,2}$, rH (kgf), not less	Number of bends, not less	Relative elongation on 100 mm, %, not less
2,30	22,0 (225)	19,5 (198)	4	2,0
2,50	27,0 (275)	24,0 (245)		
2,60	29,2 (295)	26,2 (265)		
2,65	30,4 (310)	27,3 (275)		
2,70	31,6 (320)	28,3 (285)		
2,80	34,0 (345)	30,5 (310)		
3,00	39,0 (400)	35,0 (355)		
3,50	54,3 (550)	47,4 (480)		2,5
3,60	57,5 (585)	50,2 (510)		
3,70	60,7 (620)	53,0 (540)		
3,80	64,1 (650)	56,0 (570)		
4,00	71,0 (720)	62,0 (630)		
4,60	89,7 (910)	82,1 (835)		3,0
4,70	93,7 (955)	85,7 (870)		
4,80	97,6 (995)	89,3 (910)		
5,00	106,0 (1085)	97,0 (985)		
5,60	106,0 (1085)	97,0 (985)		

The wire is delivered in coils with weight 500-900 kg.

LOW-CARBON WIRE FOR INDUSTRIAL WIRE MESH TU U 27.3-136-005-2003

APPLICATION:
for the production of inductrial mesh.

WIRE DIAMETER:
- from 0,3 mm up to 6,0 mm – without coating;
- from 0,4 mm up to 5,0 mm – galvanized.

TYPE OF TREATMENT:
- without heat treatment – galvanized and without coating;
- heat treated (black annealing) – without coating.

Without heat treatment uncoated is produced by the diameter from 0,3 mm up to 6,0 mm.
Without heat treatment galvanized is produced by the diameter from 0,4 mm up to 5,0 mm.

Wire by the diameter:
- 0,3-0,5 mm is delivered in coils with weight 7-14 kg;
- 0,6-1,3 mm is delivered in coils with weight 60-100 kg;
- 1,4-5,0 mm is delivered in coils with weight 120-150 kg;
- 1,4-2,5 mm is delivered in coils of type Z2;
- more than 2,3 mm is delivered in coils with weight 800-900 kg.

Heat treated uncoated is produced by the diameter from 0,7 mm up to 6,0 mm.

Wire by the diameter:
- 0,7-1,3 mm is delivered in coils with weight 60-100 kg;
- 1,4-6,0 mm is delivered in coils with weight 120-150 kg;
- 1,7-4,0 mm is delivered in coils of type «rosette».

MECHANICAL PROPERTIES:

Diameter, mm	Tensile strength, N/mm^2	
	Without heat treatment galvanized and without coating	Heat treated without coating
0,30 - 0,45 inclusive	690 - 1370	290 - 490
0,50 - 1,30 inclusive	690 - 1270	
1,35 - 2,50 inclusive	590 - 1180	
2,60 - 3,20 inclusive	540 - 1080	
3,20 - 4,50 inclusive	440 - 930	
4,50 - 6,00 inclusive	390 - 830	

Wire can be delivered on spools.

WELDING STEEL WIRE GOST 2246-70

APPLICATION:
for arc welding and for electrodes production.

WIRE DIAMETER:
- from 0,8 mm up to 4,0 mm – for arc welding;
- from 1,6 mm up to 5,0 mm – for electrodes production.

TYPE OF COATING:
- without coating;
- copper coating: - for providing of good electric contact of wire with metal and stability of welding;
  - the thickness of copper coating is 0,15-0,40 mcm.

TOLERANCE:

Diameter, mm	Ultimate tolerances for wire, suitable for:	
	welding (fusing)	electrode production
0,8 - 1,5	-0,09	-
1,6 - 2,0	-0,12	-0,06
2,5 - 3,0	-0,12	-0,09
4,0 - 5,0	-0,16	-0,12

CHEMICAL COMPOSITION:

Wire grade	Chemical composition						
	Carbon C	Silicon Si	Manganese Mn	Chrome Cr	Nickel Ni	Sulfur S	Phosphorus P
Sv-08	<0,10	<0,03	0,35 - 0,60	<0,15	<0,30	<0,04	<0,04
Sv-08A	<0,10	<0,03	0,35 - 0,60	<0,12	<0,25	<0,03	<0,03
SV-08GS	<0,10	0,60 - 0,85	1,40 - 1,70	<0,20	<0,25	<0,025	<0,03
SV-08G2S	0,05 - 0,11	0,70 - 0,90	1,80 - 2,10	<0,20	<0,25	<0,025	<0,03

MECHANICAL PROPERTIES:

Diameter, mm	Tensile strength, N/mm^2	
	for welding (fusing)	for electrode production
0,8 - 1,5	882 - 1323	-
1,6	882 - 1274	686 - 980
2,0	784 - 1176	686 - 980
>2,0	686 - 1029	637 - 931

Mechanical properties for wire made of steel grades Sv-08 and Sv-08A are not fixed.

Wire by the diameter:

- 0,80 mm – is delivered in coils of type Z2 with weight 200-250 kg, in coils with weight up to 80 kg, on welded metal cassettes with weight 15-18 kg or on polymer cassettes with weight 4-5 kg;
- 1,0-2,0 mm – is delivered in coils of type Z2 with weight 300-350 kg, in coils with weight up to 80 kg, on welded metal cassettes with weight 15-18 kg or on polymer cassettes with weight 4-5 kg;
- 3,0-5,0 mm – is delivered in coils with weight 600-800 kg or in coils with weight up to 80 kg.

COPPER COATED WELDING STEEL WIRE TU U 322-4-392-96

APPLICATION:
for mechanical method welding.

WIRE DIAMETER:
from 0,8 mm up to 5,0 mm.

STEEL GRADE:
Sv-08, Sv-08A, Sv-08GS, Sv-08G2S and other grade according to the standard GOST 2246-70.

TOLERANCE AND MECHANICAL PROPERTIES:

Diameter, mm	Ultimate tolerance of diameter, mm	Tensile strength, N/mm^2
0,8	-0,05	780 - 1570
1,0		780 - 1470
1,2		
1,4		
1,6	-0,08	
2,0		780 - 1270
2,5	-0,12	690 - 1030
3,0		
4,0	-0,16	
5,0		

Thickness of copper coating is from 0,15 mcm up to 0,40 mcm.
Wire by the diameter 0,8-2,0 mm is delivered in coils with weight 20-80 kg, in coils of type Z2, on cassettes of lined winding with weight 5 kg and 18 kg.
Wire by the diameter more than 2,0 mm is delivered in coils with weight 600-800 kg or on metal spools up to 1000 kg.

STEEL WIRE FOR ROPES
GOST 7372-79
DIN 2078
EN 10264-2

APPLICATION:
for the production of steel wire ropes.

WIRE DIAMETER:
from 0,30 mm up to 3.60 mm.

TYPE OF COATING:
without coating and galvanized.

GOST 7372-79
Zinc coating has the following thickness groups:
- group C – for moderate working conditions;
- group G – for hard working conditions;
- group OG – for extra-hard working conditions.

DIN 2078
By the coating is produced:
- ungalvanized – bк;
- galvanized – noZn;

EN 10264-2
By the coating is produced:
- ungalvanized;
- galvanized – according to class B.

MECHANICAL PROPERTIES acc. to GOST 7372-79:

Diameter, mm	Tensile strength, N/mm²			
	Ungalvanized	Galvanized		
		group C	group G	group OG
0,30 - 0,36	1570 - 2160	1770 - 2160	1770 - 2160	-
0,38 - 0,50	1570 - 2160	1570 - 2160	1570 - 2160	-
0,55 - 0,65	1370 - 2160	1370 - 2160	1370 - 2160	-
0,70 - 0,75	1370 - 2160	1370 - 2160	1370 - 2160	-
0,80 - 0,85	1370 - 2160	1370 - 2160	1370 - 2160	-
0,90 - 1,10	1370 - 2160	1370 - 2160	1370 - 2160	1570 - 1770
1,15 - 1,20	1370 - 2160	1370 - 2060	1370 - 2060	1570 - 1770
1,30 - 1,40	1370 - 2160	1370 - 2060	1370 - 2060	1570 - 1770
1,50 - 2,00	1370 - 2160	1370 - 1960	1370 - 1960	1570 - 1770
2,10 - 2,40	1370 - 1960	1370 - 1960	1370 - 1960	1570 - 1770
2,50 - 2,80	1370 - 1860	1370 - 1770	1370 - 1770	1570 - 1770
2,90 - 3,40	1370 - 1770	1370 - 1770	1370 - 1770	1570 - 1770
3,50 - 3,60	1370 - 1770	1370 - 1670	1370 - 1670	-

MECHANICAL PROPERTIES acc. to EN 10264-2:

Diameter, mm	Tensile strength, N/mm²	
	Ungalvanized	Galvanized (class B)
0,3 - 0,5	1570 - 2160	1770 - 2160
0,55 - 1,1	1370 - 2160	1370 - 2160
1,15 - 1,40	1370 - 2160	1370 - 2060
1,5 - 2,0	1370 - 2160	1370 - 1960
2,1 - 2,4	1370 - 1960	1370 - 1960
2,5 - 2,8	1370 - 1860	1370 - 1770
2,9 - 3,4	1370 - 1770	1370 - 1770
3,5 - 3,6	1370 - 1770	1370 - 1670

MECHANICAL PROPERTIES acc. to DIN 2078:

Diameter, mm	Tensile strength, N/mm²	
	Ungalvanized bк	Galvanized noZn B
0,3 - 0,5	1570 - 1960	1570 - 1960
0,55 - 1,1	1370 - 1960	1370 - 1960
1,2 - 2,4	1370 - 1960	1370 - 1960
2,5 - 2,8	1370 - 1860	1370 - 1770
2,9 - 3,4	1370 - 1770	1370 - 1770
3,5 - 3,6	1370 - 1770	1370 - 1670

Wire is coated by the conserving oil for the anti-corrosion protection.

Packing of wire:

- wire by the diameter 0,3-0,55 mm in coils is wrapped with waterproof paper and laid into the hard packing or in BS-60, BP-60 spools is installed on pallets and wrapped with «stretch-folia» film;
- wire by the diameter more than 0,6 mm is wrapped with polymeric film or with polypropylene cloth.

Wire by the diameter:

- 0,3-0,5 mm is delivered in coils with weight 7-14 kg or on BS-60, BP-60 spools with weight 16-25 kg;
- 0,6-1,3 mm is delivered in coils with weight 60-100 kg or in coils of type Z2;
- 1,4-2,5 mm is delivered in coils with weight 120-150 kg or in coils of type Z2;
- 2,3-3,6 mm is delivered in coils with weight 120-150 kg or in coils with weight up to 900 kg.

At the customer's request the production of wire of the intermediate diameters is allowed.

SPRING CARBON STEEL WIRE
GOST 9389-75
EN 10270-1
DIN 17223

APPLICATION:
for the production of springs coiled in a cold condition and not subjected to hardening.

WIRE DIAMETER:
from 0,3 mm up to 8,0 mm.

According to the standard GOST 9389-75 wire is produced:
- normal and higher precision;
- by mechanical properties: classes 1, 2, 3 and grades Б and В.

According to the standard EN 10270-1 wire is produced:
- by mechanical properties: SL, SM and SH groups;
- by coating: uncoated, phosphated, galvanized.

According to the standard DIN 17223 wire is produced:
- by mechanical properties: grade A and grade B;
- by coating: uncoated and phosphated.

MECHANICAL PROPERTIES acc. to GOST 9389-75 defining the class of wire:

Diameter, mm	Tensile strength, H/mm²		
	class 1	class 2	class 3
0,30	2700 - 3040	2260 - 2700	1770 - 2260
0,32 - 0,36	2650 - 2990	2210 - 2650	1720 - 2210
0,40 - 0,60	2600 - 2940	2160 - 2600	1670 - 2160
0,63 - 0,80	2550 - 2890	2160 - 2550	1670 - 2160
0,90	2500 - 2790	2110 - 2500	1620 - 2110

Diameter, mm	class 1	class 2	class 3
1,00	2450 - 2740	2060 - 2450	1570 - 2060
1,10	2400 - 2700	2010 - 2450	1520 - 2010
1,20	2350 - 2650	1960 - 2350	1520 - 1960
1,30	2300 - 2600	1960 - 2300	1520 - 1960
1,40	2260 - 2550	1960 - 2260	1470 - 1960
1,50	2210 - 2500	1860 - 2210	1420 - 1860
1,60	2160 - 2450	1860 - 2160	1420 - 1860
1,70 - 1,80	2060 - 2350	1770 - 2060	1370 - 1770
1,90	2010 - 2300	1770 - 2010	1370 - 1770
2,00	2010 - 2260	1770 - 2010	1370 - 1770
2,10	1960 - 2210	1720 - 1960	1370 - 1720
2,20 - 2,30	1910 - 2160	1670 - 1910	1320 - 1670
2,50	1810 - 2060	1620 - 1860	1270 - 1620
2,80	1770 - 2010	1620 - 1860	1270 - 1620
3,00	1720 - 1960	1620 - 1860	1270 - 1620
3,20	1720 - 1960	1520 - 1770	1230 - 1520
3,50 - 3,60	1670 - 1910	1520 - 1770	1230 - 1520
4,00	1620 - 1860	1470 - 1720	1180 - 1470
4,20	1570 - 1810	1420 - 1670	1130 - 1420
4,50	1520 - 1770	1370 - 1620	1130 - 1370
5,00	1470 - 1720	1370 - 1620	1130 - 1370
6,00	-	1320 - 1570	-
7,00	-	1230 - 1420	-
8,00	-	1230 - 1420	-

MECHANICAL PROPERTIES acc. to GOST 9389-75 defining the grades of wire:

Diameter, mm	Tolerance on tensile strength of wire in a lot, max, N/mm², not less			
	grad Б	grad В		
	class 1, 2, 2А, 3	class 1	class 2, 2А	class 3
0,30 - 0,40	280	340	440	490
0,45 - 0,56	260	340	440	490
0,60 - 0,70	240	340	440	490
0,80 - 0,90	230	340	440	490
1,00 - 1,10	220	290	390	490
1,20 - 1,30	210	290	390	440
1,40 - 1,60	200	290	290	440
1,70 - 1,90	200	290	250	390
2,00 - 3,00	200	250	250	340
3,10 - 8,00	200	250	250	290

MECHANICAL PROPERTIES acc. to EN 10270-1:

Diameter, mm		Tensile strength Rm for grades		
Nominal diameter, mm	Tolerant deviation, mm	SL N/mm²	SM N/mm²	SH N/mm²
0,30	±0,010	-	2350 - 2630	2680 - 2940
0,35	±0,010	-	2310 - 2580	2590 - 2870
0,40	±0,010	-	2270 - 2550	2560 - 2830
0,45	±0,010	-	2240 - 2500	2510 - 2780
0,50	±0,010	-	2200 - 2470	2480 - 2740
0,53	±0,010	-	2180 - 2450	2460 - 2720
0,56	±0,010	-	2170 - 2430	2440 - 2700
0,60	±0,010	-	2140 - 2400	2410 - 2670
0,63	±0,010	-	2130 - 2380	2390 - 2650
0,65	±0,010	-	2120 - 2370	2380 - 2640
0,70	±0,015	-	2090 - 2350	2360 - 2610
0,75	±0,015	-	2070 - 2320	2330 - 2580
0,80	±0,015	-	2050 - 2300	2310 - 2560
0,85	±0,015	-	2030 - 2280	2290 - 2530
0,90	±0,020	-	2010 - 2260	2270 - 2510

Nominal diameter, mm	Tolerant deviation, mm	SL N/mm²	SM N/mm²	SH N/mm²
0,95	±0,020	-	2000 - 2240	2250 - 2490
1,00	±0,020	1720 - 1970	1980 - 2220	2230 - 2470
1,05	±0,020	1710 - 1950	1960 - 2200	2210 - 2450
1,10	±0,020	1690 - 1940	1950 - 2190	2200 - 2430
1,20	±0,020	1670 - 1910	1920 - 2160	2170 - 2400
1,25	±0,020	1660 - 1900	1910 - 2140	2150 - 2380
1,30	±0,020	1640 - 1890	1900 - 2130	2140 - 2370
1,40	±0,020	1620 - 1860	1870 - 2100	2110 - 2340
1,50	±0,020	1600 - 1840	1850 - 2080	2090 - 2310
1,60	±0,020	1590 - 1820	1830 - 2050	2060 - 2290
1,70	±0,020	1570 - 1800	1810 - 2030	2040 - 2260
1,80	±0,025	1550 - 1780	1790 - 2010	2020 - 2240
1,90	±0,025	1540 - 1760	1770 - 1990	2000 - 2220
2,00	±0,025	1520 - 1750	1760 - 1970	1980 - 2200
2,10	±0,025	1510 - 1730	1740 - 1960	1970 - 2180
2,25	±0,025	1490 - 1710	1720 - 1930	1940 - 2150
2,40	±0,025	1470 - 1690	1700 - 1910	1920 - 2130
2,50	±0,025	1460 - 1680	1690 - 1890	1900 - 2110
2,60	±0,025	1450 - 1660	1670 - 1880	1890 - 2100
2,80	±0,030	1420 - 1640	1650 - 1850	1860 - 2070
3,00	±0,030	1410 - 1620	1630 - 1830	1840 - 2040
3,20	±0,030	1390 - 1600	1610 - 1810	-
3,40	±0,030	1370 - 1580	1590 - 1780	-
3,60	±0,030	1350 - 1560	1570 - 1760	-
3,80	±0,030	1340 - 1740	1550 - 1740	-
4,00	±0,030	1320 - 1520	1530 - 1730	-
4,25	±0,035	1310 - 1500	1510 - 1700	-
4,50	±0,035	1290 - 1490	1500 - 1680	-
4,75	±0,035	1270 - 1470	1480 - 1670	-
5,00	±0,035	1260 - 1450	1460 - 1650	-

At the customer's request wire is produced with zinc coating and phosphate coating.

MECHANICAL PROPERTIES acc. to DIN 17223:

Diameter, mm	Tensile strength, N/mm²		Diameter, mm	Tensile strength, N/mm²		Diameter, mm	Tensile strength, N/mm²	
	grade A	grade B		grade A	grade B		grade A	grade B
0,30	-	2370 - 2650	**0,80**	-	2050 - 2300	**2,10**	1510 - 1730	1740 - 1960
0,32	-	2350 - 2630	**0,85**	-	2030 - 2280	**2,25**	1490 - 1710	1720 - 1930
0,34	-	2330 - 2600	**0,90**	-	2010 - 2260	**2,40**	1470 - 1690	1700 - 1910
0,36	-	2310 - 2580	**0,95**	-	2000 - 2240	**2,50**	1460 - 1680	1690 - 1890
0,38	-	2290 - 2560	**1,00**	1720 - 1970	1980 - 2200	**2,60**	1450 - 1660	1670 - 1880
0,40	-	2270 - 2550	**1,05**	1710 - 1950	1960 - 2200	**2,80**	1420 - 1640	1650 - 1850
0,43	-	2250 - 2520	**1,10**	1690 - 1940	1950 - 2190	**3,00**	1410 - 1620	1630 - 1830
0,45	-	2240 - 2500	**1,20**	1670 - 1910	1920 - 2160	**3,20**	1390 - 1600	1610 - 1810
0,48	-	2220 - 2480	**1,25**	1660 - 1900	1910 - 2140	**3,40**	1370 - 1580	1590 - 1780
0,50	-	2220 - 2470	**1,30**	1640 - 1890	1900 - 2130	**3,60**	1350 - 1560	1570 - 1760
0,53	-	2180 - 2450	**1,40**	1620 - 1860	1870 - 2100	**3,80**	1340 - 1540	1550 - 1740
0,56	-	2170 - 2430	**1,50**	1600 - 1840	1850 - 2080	**4,00**	1320 - 1520	1530 - 1730
0,60	-	2140 - 2400	**1,60**	1590 - 1820	1830 - 2050	**4,25**	1310 - 1500	1510 - 1700
0,63	-	2130 - 2380	**1,70**	1570 - 1800	1810 - 2030	**4,50**	1290 - 1490	1500 - 1680
0,65	-	2120 - 2370	**1,80**	1550 - 1780	1790 - 2010	**4,75**	1270 - 1470	1480 - 1670
0,70	-	2090 - 2350	**1,90**	1540 - 1760	1770 - 1990	**5,00**	1260 - 1450	1460 - 1650
0,75	-	2070 - 2320	**2,00**	1520 - 1750	1760 - 1970			

For protection from corrosion wire is coated with continuous thin lay of conserving oil.
At the customer's request wire can be produced without oiling.

Wire by the diameter:
- 0,3-0,5 mm is delivered in coils with weight 7-14 kg or on BS-60 and BP-60 spools with weight 16-25 kg;
- 0,6-1,3 mm is delivered in coils 60-100 kg or in coils of type Z2;
- 1,4-2,5 mm is delivered in coils with weight 120-150 kg or in coils of type Z2;
- 2,3-5,0 mm is delivered in coils with weight 120-150 kg or in coils with weight 500-900 kg;
- 1,7-2,5 mm is delivered in coils «rosette» type with weight 500-600 kg or 700-800 kg.

Coils, bundles, spools are packed by waterproof paper and polymeric film or polypropylene cloth.

At the customer's request the production of wire of the intermediate diameters is allowed.

CARBON STEEL WIRE FOR THE REINFORCEMENT OF THE PRESTRESSED CONCRETE CONSTRUCTIONS GOST 7348-81

APPLICATION:
for the reinforcement of concrete constructions.

WIRE DIAMETER:
3,0 mm, 5,0 mm.

Wire is produced of the following types of surface:
- round – B;
- shaped profile – Bp.

By the state of manufacturing:
with tempering.

MECHANICAL PROPERTIES:

Diameter, mm	Tensile class, N/mm^2	Actual tensile strength, N/mm^2, not less	Breaking load, N, not less	Relative elongation, %, not less	Number of kinks, not less	
					round	shaped profile
3,0	1500	1780	12600	4	9	8
5,0	1400	1670	3340	4	5	3

Wire is delivered in coils by the weight not less 100 kg.
Inner diameter of coil: diameter 3,0 mm – 1200 mm; diameter 5,0 mm – 2000 mm.

Straightness of the free laying wire end is provided within the limits of the set allowed curvature.
Wire is delivered without lubrication and unpacked. Delivery is made in open-top wagons.
Storage is done in roofed dry premises.

PROFILE SHAPED CARBON STEEL WIRE FOR THE REINFORCEMENT OF THE PRESTRESSED CONCRETE SLEEPERS TU U 27.3-136-004-2003

APPLICATION:
for reinforcement of concrete sleepers.

WIRE DIAMETER:
3,0 mm.

TYPE OF SURFACE:
with two-sided shaped profile ВрД.

Method of manufacturing:
with tempering.

MECHANICAL PROPERTIES:

Actual diameter, mm (type of profile)	Tensile class, N/mm², tempered	Actual tensile strength, N/mm²	Breaking load, N (kgf), not less	Strength $P_{0,2}$, N (kgf) tempered, not less	Relative elongation, %, not less	Bending at diameter of the cylinder 30 mm
3,0 (ВрД)	1400	1700	12000 (1225)	9900 (1010)	4,5	9

Wire is delivered in coils with weight min 200 kg.
Inner diameter of coil – min 1200 mm.
Straightness of the free laying wire end is provided within the limits of the set allowed curvature.
Wire is delivered without lubrication and unpacked.

GALVANIZED STEEL WIRE FOR CORES OF CONDUCTORS GOST 9850-72

APPLICATION:
for the production of cores for non-insulated steel-aluminium and steel-bronze conductors.

WIRE DIAMETER:
from 1,50 mm up to 4,50 mm.

Wire is produced of two grades depending upon the application:
- SC for single-wire cores;
- MC for multi-wire cores.

MECHANICAL PROPERTIES:

Diameter, mm	Tensile strength, N/mm², not less			Surface zinc mass, g/m², not less
	class A	class B	class C	group 1
1,50	1450	1340	1310	60
1,65	1450	1340	1310	70
1,85	1450	1340	1310	70
2,00	1450	1340	1310	70
2,10	1450	1340	1310	80
2,20	1450	1340	1310	80
2,30	1410	1310	1310	80
2,40	1410	1310	1310	80
2,50	1410	1310	1310	100
2,65	1410	1310	1280	100
2,80	1410	1310	1280	100
2,95	1410	1310	1280	100
3,05	1410	1290	1280	100
3,20	1410	1290	1280	100
3,40	1410	1290	1180	100
3,50	1410	1290	1180	100
3,60	1380	1290	1180	100
3,80	1380	1290	1180	100
4,50	1380	1290	1180	100

Wire is delivered in coils with weight from 350 kg up to 800 kg.

STEEL WIRE FOR HIGH-PRESSURE HOSES TU U 27.3-136-006-2003

APPLICATION:
for the production of high-pressure hoses for general purpose (class B) and for special techniques (class A).

WIRE DIAMETER:
0,3 mm.

TYPE OF SURFACE
- phosphated;
- galvanized.

ULTIMATE TOLERANCE OF DIAMETER AND MECHANICAL PROPERTIES:

Actual diameter, mm	Ultimate tolerance of diameter, mm		Wire group	Breaking strength of wire, N (kgf)	Strength with knot, % not less	Number of twists, not less
	class A	class B				
0,3	±0,01	+0,02 -0,01	1	147,0 - 176,4 (15,0 - 18,0)	58	50
			2	171,5 - 195,0 (17,5 - 19,9)	56	50
			3	196,0 - 225,4 (20,0 - 23,0)	56	40

Quantity of zinc – min 20 g/m^2.

Wire is delivered in coils with weight 7-14 kg and on metal spools BS-60, BS-60S with weight 16-25 kg. Each reel or coil of wire is packed into waxed or waterproof paper and isdelivered in special metal packages or wooden boxes.

GALVANIZED MIDDLE CARBON HEAT TREATED WIRE FOR BINDING OF COTTON BALES TU U DP 27.3-26209430-071-2003

APPLICATION:
for the binding of the cotton bales.

WIRE DIAMETER:
3,6 mm; 3,8 mm; 4,0 mm.

SPECIFICATION:

Diameter, mm	Ultimate tolerance of diameter, mm	Tensile strength, N/mm^2	Breaking strength of the connecting lock, not less N (kgf)	Relative elongation on 100 mm, %, not less	Surface zinc mass, g/m^2, not less
3,6	+0,06 -0,04	1270 - 1520	8825 (850)	5	70
3,8			9310 (950)		
4,0			9810 (1050)		

Wire is delivered in coils with weight 500-800 kg, by one piece length.
The welding of the wire ends is not allowed.

HEAT-TREATED STEEL WIRE FOR TRACTORS AND AGRICULTURAL MACHINES TU U 27.3-05813363-066-2001

APPLICATION:
for the production tractors and agricultural machines.

WIRE DIAMETER:
0,9 mm; 1,0 mm; 1,2 mm; 1,4 mm.

TYPE OF HEAT-TREATMENT:
hardened and tempering.

MECHANICAL PROPERTIES:

Actual diameter, mm	Temporary tensile strength, N/mm^2 (kgf/mm^2)	Spread of tensile strength in coil, N/mm^2 (kgf/mm^2), max	Relative narrowing, %, not less
0,9	1860 - 2060 (190 - 210)	100 (10)	50
1,0	1810 - 2010 (185 - 205)		
1,2	1770 - 1960 (180 - 200)		
1,4	1720 - 1910 (175 - 195)		

The wire is delivered with a normalized straightness value.
Wire is delivered in coils with weight 40-50 kg.

CARBON WIRE FOR MESH TU 14-4-1566-89

APPLICATION:
for the production of corrugated mesh.

WIRE DIAMETER:
from 1,3 mm up to 5,0 mm.

STEEL GRADES:
St45, St50, St55.

TYPE OF COATING:
without coating.

MECHANICAL PROPERTIES:

Diameter, mm	Diameter tolerance, mm increased accuracy	Tensile strenght, N/mm^2 (kgf/mm^2)	Number of bendings, not less		Number of twists, not less	
			class 1	class 2	class 1	class 2
1,3	±0,03	1370 - 1700 (140 - 173)	12	10	26	17
1,4			12	10	26	17
1,6		1270 - 1570 (130 - 160)	17	15	26	17
1,8			14	13	26	17
2,0			12	11	26	16
2,2			19	17	24	15
2,5			19	17	24	15
3,0			11	10	20	13
3,6	±0,04	1180 - 1470 (120 - 150)	11	9	19	13
4,0			8	7	15	13
5,0		1080 - 1370 (110 - 140)	11	9	12	9

Wire of the diameter:
- 1,3-5,0 mm is produced in coils with weight 120-150 kg;
- 2,3-5,0 mm is produced in coils with weight up to 900 kg.

Wire is coated by the conserving oil and wrapped with polypropylene fabric for the anti-corrosion protection. At the customer's request the production and delivery of wire without lubrication and without packaging is allowd.

GALVANIZED STEEL WIRE FOR THE PRODUCTION OF CABLES AND CONDUCTORS TU 14-4-1457-87

APPLICATION:
for the production of cables and conductors.

WIRE DIAMETER:
0,3 mm; 0,5 mm.

MECHANICAL PROPERTIES:

Diameter, mm	Surfance zinc mass, g/m^2
	group G
0,3	30
0,5	50

Break with the wire knot is min 52%.

Wire is produced of two «class» depending upon the machanical properties:

Diameter, mm	class 1		class 2	
	Tensile strength, N/mm^2	Number of twists, not less	Tensile strength, N/mm^2	Number of twists, not less
0,3	1960 - 2340	50	1570 - 1950	55
0,5	1770 - 2070	35	1370 - 1670	40

Wire is delivered in coils with weigh not less 10 kg or on BS-60, BP-60S spools with weight not less 16 kg. Wire coils are packed with one layer of waterproof paper and laid into a wooden boxes.

CARBON STEEL WIRE FOR COLD HANDLING GOST 5663-79

APPLICATION:
for cold-formed products.

The wire is made from the steel of grade 08кп and 10кп.

WIRE DIAMETER:
from 2,7 mm to 5,2 mm. Intermediate diameters multiples of 0,05 mm may be produced.

WIRE IS MANUFACTURED:
According to the precision of production:
- normal precision;
- higher precision.

According to the tensile strength:
- first class 1;
- second class 2.

ULTIMATE TOLERANCE OF DIAMETER:

Actual diameter, mm	Ultimate tolerance of diameter, mm	
	Normal precision	Higher precision
2,7 - 3,0 inclusive	-0,06	-0,04
3,0 - 5,2	-0,08	-0,05

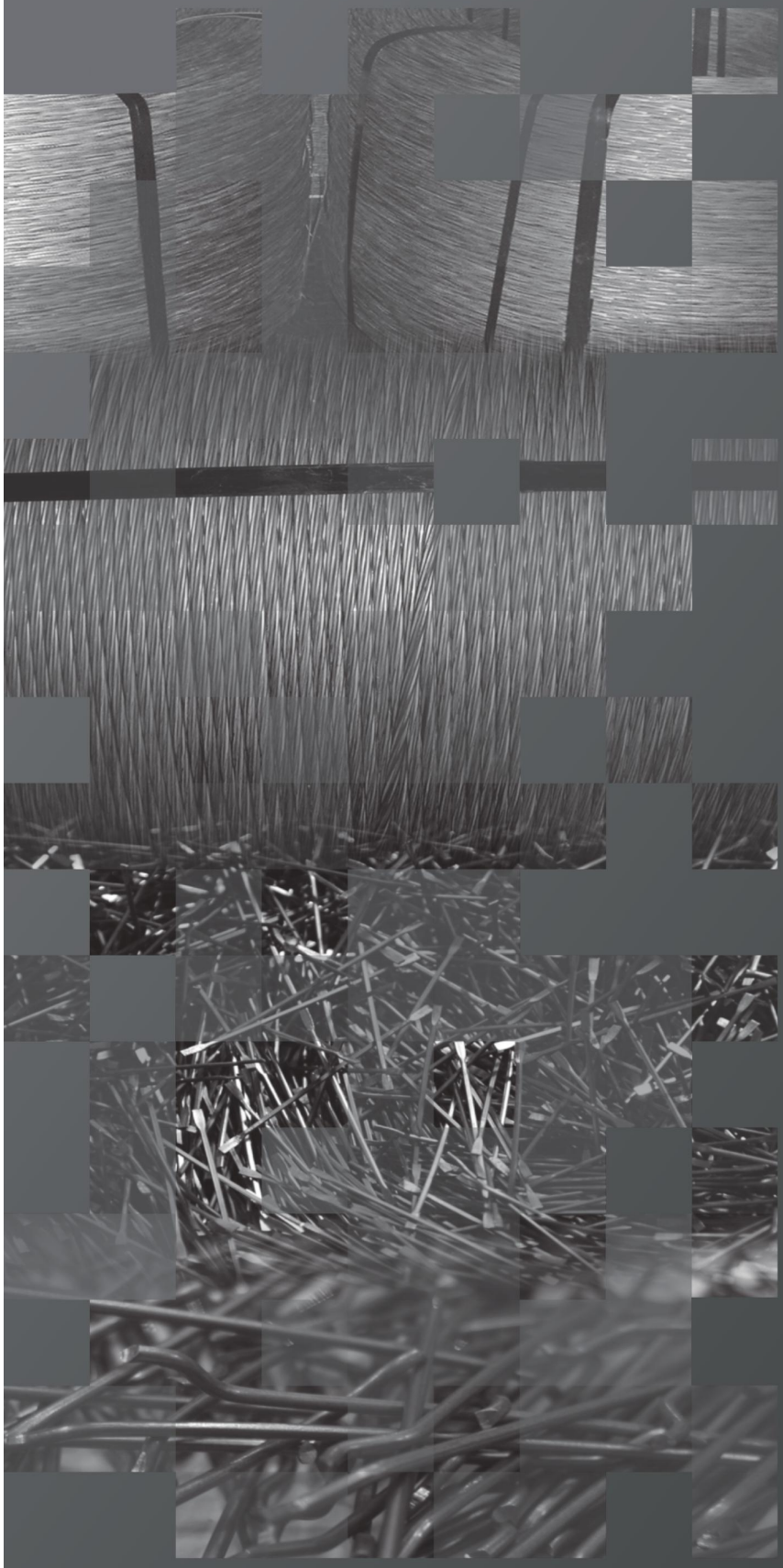
MECHANICAL PROPERTIES:

Steel grade	Tensile strength, N/mm^2 (kgf/mm^2)		Relative narrowing, %, not less	Draft
	class 1	class 2, not more		
08кп	440 - 590	590	55	up to 1/2 or up to 1/3 of the original sample height, is set by the consume
10кп	(45 - 60)	(60)		

The wire is delivered in coils with weight 120-150 kg, in coils up to 500 kg and in coils of the type of «rosetta» with weight 500-600 kg.

THEORETICAL WEIGHT OF 1000 m WIRE:

Diameter, mm	Cross section area, mm^2	Weight of 1000 m, kg
0,3	0,0707	0,555
0,4	0,1257	0,99
0,5	0,196	1,54
0,6	0,283	2,22
0,7	0,385	3,02
0,8	0,503	3,95
0,9	0,636	4,99
1,0	0,785	6,17
1,1	0,950	7,46
1,2	1,131	8,88
1,3	1,327	10,42
1,4	1,539	12,08
1,5	1,767	13,87
1,6	2,01	15,78
1,7	2,27	17,82
1,8	2,54	19,94
1,9	2,84	22,26
2,0	3,14	24,65
2,1	3,45	27,19
2,2	3,80	29,83
2,3	4,15	32,58
2,5	4,91	38,54
2,8	6,16	48,36
3,0	7,07	55,50
3,2	8,04	63,11
3,4	9,08	71,28
3,5	9,62	75,52
3,6	10,18	79,90
4,0	12,57	98,70
4,2	13,85	108,7
4,5	15,90	124,8
5,0	19,63	154,2



STALKANATSILUR

PC STRANDS

STEEL FIBER

REINFORCEMENT STABILIZED STRANDS

Reinforcement stabilized strands are produced with wide range of application at the production of large constructions: buildings, structures, bridges, conduits, reservoirs, airports, tunnels hangars, oildrilling platforms, nuclear power stations; at the production of concrete railway sleepers. The application of multiwire reinforcement stabilized strands allows to achieve the same strength in prestressed constructions without increasing the diameter and the number of strands with obvious economy on account of their fastening at the anchors.

Since 1994 the production of stabilized reinforcement strands with low relaxation has been developed. In 2016 the enterprise put into operation new up-to-date equipment that allows to produce stabilized reinforcement strands up to 16.2 thousand tons per year.

The good mechanical characteristics of reinforcement strands after heat and mechanical treatment, continuous improvement of the technology have a decisive significance in the use of steel products in the building industry and make reinforcement strands for prestressed concrete constructions by one of the main products.

The most up-to-date technologies which meet the buyer's requirements at the existing system of quality control are used at the strands' production.

PC STRANDS
GOST 13840-68
FprEN 10138-3-2009
BS 5896
ASTM A416/A416M
GOST R 53772-2010

APPLICATION:

for the reinforcement of prestressed concrete constructions.

DIAMETER:

from 6,50 mm up to 15,24 mm.

MATERIAL:

Cold-drawn wire, made of high carbon rod by diameter 6.5-12.5 mm is used for production of the reinforcement strands.

Steel strands are delivered in coils of this size:

- Inner diameter, mm: 750, 800, 900;
- Outer diameter, mm: max 1600;
- Width, mm: 750, 630.

CHEMICAL COMPOSITION:

C, %	Mn, %	Si, %	S, %	P, %
0,70 - 0,90	0,40 - 0,70	0,17 - 0,37	max 0,035	max 0,035

MECHANICAL PROPERTIES:

Relative diameter, mm	Nominal strength, N/mm^2	Nominal cross section area, mm^2	Nominal mass of strand, g/m	Breaking strength, kN, not less	Strength at relative yield point Fp, kN, not less	Elongation, % (base 500mm), not less	Relaxation after 1000 hours, %, not more
FprEN 10138-3:2009							
three-wire							
6,5	1860	21,2	165,6	39,4	33,9	3,5	2,5
6,9	1860	23,4	182,8	43,5	37,4	3,5	2,5
8,6	1860	37,4	292,1	69,6	59,9	3,5	2,5
seven-wire							
6,9	1770	29	226,5	51,3	45,1	3,5	2,5
6,9	1860	29	226,5	53,9	47,4	3,5	2,5
8,0	1860	38	296,8	70,7	62,2	3,5	2,5
9,0	1770	50	390,5	88,5	77,9	3,5	2,5
9,0	1860	50	390,5	93	81,8	3,5	2,5
9,3	1770	52	406,1	92	81	3,5	2,5
9,3	1860	52	406,1	96,7	85,1	3,5	2,5
9,6	1770	55	429,6	97,4	85,7	3,5	2,5
9,6	1860	55	429,6	102	89,8	3,5	2,5
11,0	1770	70	546,7	124	109	3,5	2,5
11,0	1860	70	546,7	130	114	3,5	2,5
12,5	1770	93	726,3	165	145	3,5	2,5
12,5	1860	93	726,3	173	199	3,5	2,5
12,9	1770	100	781	177	156	3,5	2,5
12,9	1860	100	781	186	164	3,5	2,5
15,2	1770	139	1086	246	216	3,5	2,5
15,2	1860	139	1086	259	228	3,5	2,5

Relative diameter, mm	Nominal strength, N/mm²	Nominal cross section area, mm²	Nominal mass of strand, g/m	Breaking strength, kN, not less	Strength at relative yield point Fp, kN, not less	Elongation, % (base 500mm), not less	Relaxation after 1000 hours, %, not more
BS 5896 (seven-wire)							
8,0	1860	38	298	70	59	3,5	2,5
9,3	1770	52	406,1	92	81	3,5	2,5
9,3	1860	52	406,1	96,7	85,1	3,5	2,5
9,6	1860	55	432	102	87	3,5	2,5
11,0	1770	71	557	125	106	3,5	2,5
11,3	1860	75	585,8	140	123	3,5	2,5
12,5	1770	93	730	164	139	3,5	2,5
12,5	1860	93	726,3	173	152	3,5	2,5
12,9	1860	100	781	186	164	3,5	2,5
15,2	1670	139	1086	232	204	3,5	2,5
15,2	1860	139	1086	259	228	3,5	2,5
ASTM A416/A416M (seven-wire)							
7,9	1725 (250)	37,42	294	64,5	58,1	3,5	2,5
9,5	1725 (250)	51,6	405	89	80,1	3,5	2,5
9,53	1860 (270)	54,8	432	102,3	92,1	3,5	2,5
11,1	1725 (250)	69,68	548	120,1	108,1	3,5	2,5
11,1	1860 (270)	74,2	582	137,9	124,1	3,5	2,5
12,7	1725 (250)	92,9	730	160,1	144,1	3,5	2,5
12,7	1860 (270)	98,7	775	183,7	165,3	3,5	2,5
15,2	1725 (250)	139,35	1094	240,2	215,2	3,5	2,5
15,24	1860 (270)	140	1102	260,7	234,6	3,5	2,5
GOST 13840-68 (seven-wire)							
9,0	1770	53	419	93,5	79,5	4,0	2,5
12,0	1770	93	736	164	139,5	4,0	2,5
15,0	1670	139	1098	232	197	4,0	2,5
GOST R 53772-2010 (seven-wire)							
6,9	1770	29	226,5	51,3	45,1	3,5	2,5
6,9	1860	29	226,5	53,9	47,4	3,5	2,5
9,0	1770	50	390,5	88,5	77,9	3,5	2,5
9,0	1860	50	390,5	93	81,8	3,5	2,5
9,3	1770	52	406,1	92	81	3,5	2,5
9,3	1860	52	406,1	96,7	85,1	3,5	2,5
9,6	1770	55	429,6	97,4	85,7	3,5	2,5
9,6	1860	55	429,6	102	89,8	3,5	2,5
11,0	1770	71,8	660,9	127	111	3,5	2,5
11,0	1860	71,8	660,9	133	117	3,5	2,5
12,5	1770	93	726,3	165	145	3,5	2,5
12,5	1860	93	726,3	172	152	3,5	2,5
12,7	1770	98,7	775	175	154	3,5	2,5
12,7	1860	98,7	775	184	162	3,5	2,5
12,9	1770	100	781	177	156	3,5	2,5
12,9	1860	100	781	186	164	3,5	2,5
15,2	1770	139	1086	246	216	3,5	2,5
15,2	1860	139	1086	259	228	3,5	2,5

At the customer's request strands can be made of wire with dents, while the central wire in the strands is made smooth.

Three-wire strands can be produced from smooth wire and indented wire.

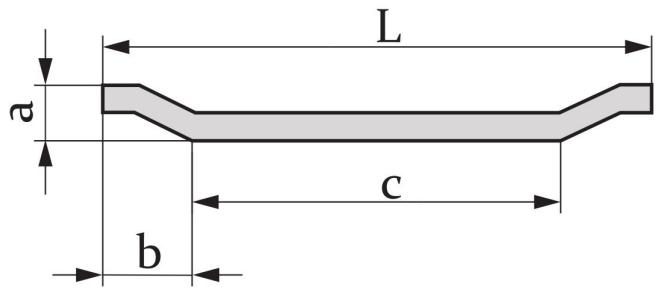
Seven-wire strands are produced with lined reeling.

The maximum weight of the coils is 4 tons.

STEEL FIBER EN 14889-1

APPLICATION:
industrial floors, roads, airports, sprayed concrete for mining, walls constructions, road base reinforcement, underwater concrete, protective structures and other.

MATERIAL:
general purpose low-carbon galvanized wire (non heat-treated) and wire without coating. Tensile strength of galvanized wire is 900-1500 N/mm^2, wire without coating: 1000-1700 N/mm^2.

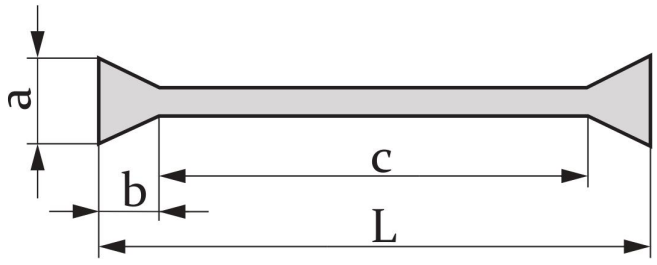


Steel fiber with hooked ends (HE)

a – height of hooked ends
b – length of hooked ends
c – length of midsection
L – length of fiber

STEEL FIBER WITH HOOKED ENDS (HE):

Symbol notation	Diameter, mm	Length, mm	Length of hooked ends, mm	Height of hooked ends, mm
HE 60/1,0	1,0 ±0,1	60,0 ±6,0	5,0 ±1,0	3,1 ±0,5
HE 60/0,9	0,9 ±0,09	60,0 ±6,0	5,0 ±1,0	3,1 ±0,5
HE 60/0,85	0,85 ±0,08	60,0 ±6,0	5,0 ±1,0	2,9 ±0,5
HE 60/0,8	0,8 ±0,08	60,0 ±6,0	5,0 ±1,0	2,9 ±0,5
HE 60/0,75	0,75 ±0,07	60,0 ±6,0	5,0 ±1,0	2,9 ±0,5
HE 60/0,7	0,7 ±0,07	60,0 ±6,0	5,0 ±1,0	2,8 ±0,5
HE 50/1,0	1,0 ±0,1	50,0 ±5,0	5,0 ±1,0	3,1 ±0,5
HE 50/0,8	0,8 ±0,08	50,0 ±5,0	5,0 ±1,0	2,9 ±0,5
HE 50/0,7	0,7 ±0,07	50,0 ±5,0	5,0 ±1,0	2,8 ±0,5

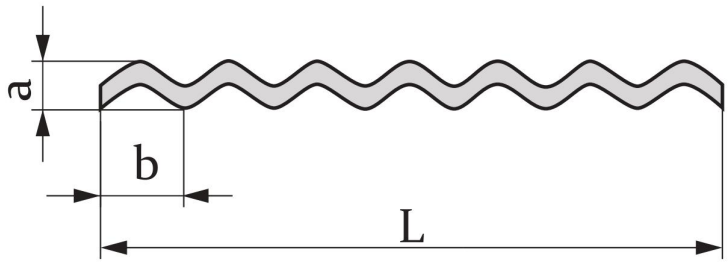


Steel fiber with flattened ends (FE)

a – width of flattened ends
b – length of flattened ends and transition zone
c – length of midsection
L – length of fiber

STEEL FIBER WITH FLATTENED ENDS (FE):

Symbol notation	Diameter, mm	Length, mm	Width of flattened ends, mm	Length of flattened ends and transition zone, mm
FE 50/1,0	1,0 ±0,10	50,0 ±3,0	2,0 ±0,3	5,0 +0,5/-1,0
FE 50/0,85	0,85 ±0,05	55,0 ±3,0	1,7 ±0,3	5,0 +0,5/-1,0
FE 50/0,8	0,8 ±0,08	50,0 ±3,0	1,6 ±0,3	5,0 +0,5/-1,0



Waved steel fiber (URW)

a – wave height
b – wave length
L – length of fiber

WAVED STEEL FIBER (URW):

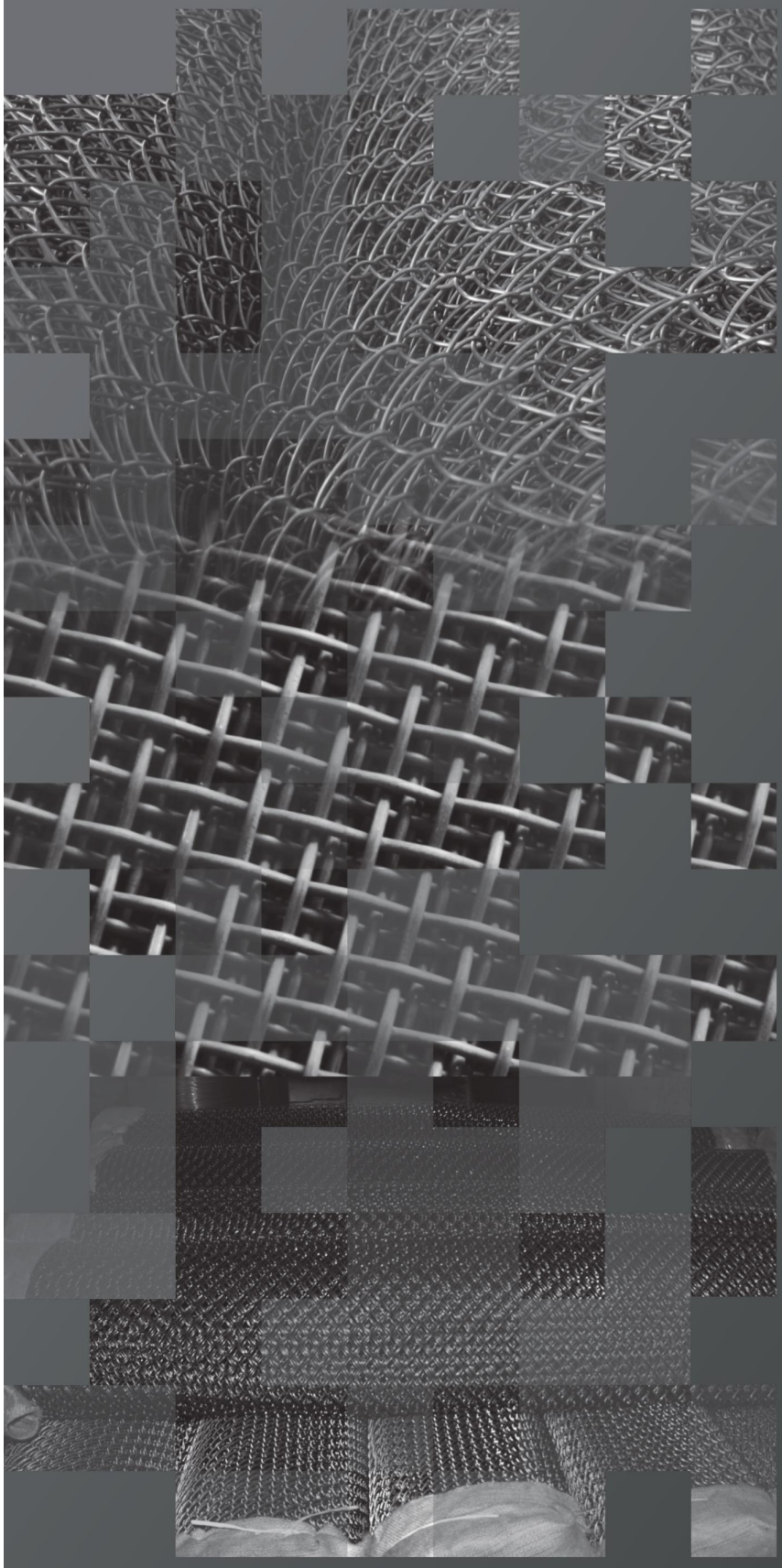
Symbol notation	Diameter, mm	Length, mm	Wave length, mm	Wave height, mm
URW 60/1,2	1,2 ±0,12	60,0 ±6,0	8,0 ±1,0	2,0 +0,6
URW 60/1,05	1,05 ±0,10	60,0 ±6,0	8,0 ±1,0	2,0 +0,6
URW 60/1,0	1,0 ±0,10	60,0 ±6,0	8,0 ±1,0	2,0 +0,6
URW 55/0,8	0,8 ±0,08	55,0 ±5,0	8,0 ±1,0	2,1 +0,3
URW 50/1,0	1,0 ±0,10	50,0 ±5,0	8,0 ±1,0	2,0 +0,6

PACKING and DELIVERY:

Steel fiber HE, URW, FE is packed in cardboard boxes with weight 10 kg, 15 kg, 20 kg, 25 kg depending on steel fiber types or in «big-bag» with weight 350 kg, 500 kg, 1000 kg.

At the customer's request it is possible to supply all kinds of fiber in other kinds of packing.

When packing of fiber in the boxes, aligned stowage is possible. It will prevent the fiber caking during the mixing of construction mixture and concrete that will cut down expenses of the construction firms.



STALKANATSILUR

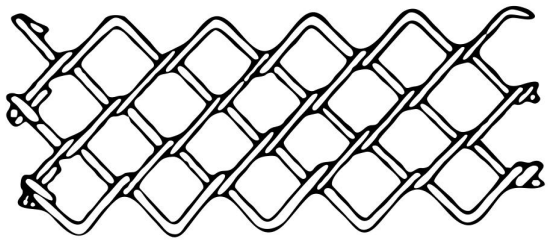
STEEL MESH

BRAIDED MESH
GOST 5336-80
TU U 28.7-00191046-016-2003

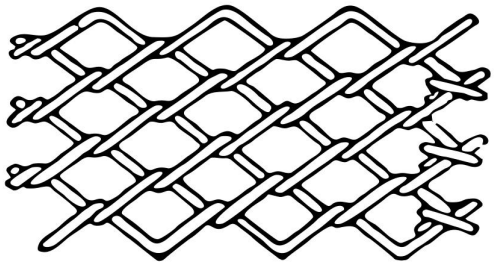
The mesh is applied for territory fencing, for mountainside protection and so on.
The mesh is produced from low carbon wire of different diameters.

TYPE OF COATING:
- uncoated;
- galvanized.

TYPE OF CELLS:
- rhombic, with 60 dg. acute angle of rhomb;
- square.



Mesh
with square cells



Mesh
with rhombic cells

Mesh characteristics by cells size:

MESH WITH RHOMBIC OR SQUARE CELLS:

Mesh number	Nominal size of cells one side, mm	Maximum deviation of cells one side, mm		The line of nominal diameters of wire, mm
		for group 1	for group 2	
10	10	+0,6	+1,1/-0,4	1,20; 1,25; 1,30; 1,40; 1,50; 1,60; 1,8
15	15	+0,9	+1,5/-0,7	1,20; 1,25; 1,30; 1,40; 1,50; 1,60; 1,70; 1,80; 2,0
20	20	+1,2	+2,0/-1,0	1,20; 1,40; 1,60; 1,70; 1,80; 1,90; 2,00

MESH WITH SQUARE CELLS:

Mesh number	Nominal size of cells one side, mm	Maximum deviation of cells one side, mm		The line of nominal diameters of wire, mm
		for group 1	for group 2	
25	25	+1,5	+2,5/-1,0	1,60; 1,70; 1,80; 1,90; 2,00; 2,10; 2,20; 2,30; 2,40; 2,50
30	30	+1,8	+3,0/-1,3	1,60; 1,70; 1,80; 1,90; 2,00; 2,10; 2,20; 2,30; 2,40; 2,50; 2,60
35	35	+2,3	+3,5/-1,5	1,6,1,80; 1,90; 2,00; 2,10; 2,20; 2,30; 2,40; 2,50; 2,60
40	40	+2,4	+4,0/-2,0	1,6; 1,80; 2,00; 2,10; 2,20; 2,30; 2,40; 2,50; 2,70; 2,80; 3,00
45	45	+2,7	+4,5/-2,1	2,20; 2,40; 2,50; 2,60; 2,80; 3,00
50	50	+3,0	+5,0/-2,5	1,6; 2,00; 2,20; 2,40; 2,50; 2,60; 2,80; 3,00
60	60	+3,6	+6,0/-3,0	1,8; 2,40; 2,50; 2,80; 3,00

Mesh is delivered in rolls.
Roll consists from one piece of mesh min 5 m or 10 m length, depending on mesh number.

At the customer's request the production of steel mesh from other diameters and steel mesh from other nominal size of cell is allowd.

CORRUGATED MESH
TU U 28.7-00191046-018-2004

Steel mesh with square ceels from the corrugated wire.

APPLICATION:
for the manufacture of fences and other products.

The mesh is made from low carbon wire without coating with a diameter from 3,0 mm up to 5,0 mm according TU U 27.3-136-005-2003.

Mesh are manufactured:

TYPE OF CELLS:
square.

BY CONSTRUCTION:
complicated corrugated (CC).

TYPE OF COATING:
uncoated.

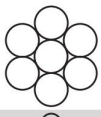
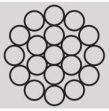
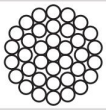
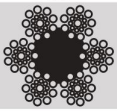
ON CARBON CONTENT:
low-carbon.

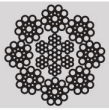
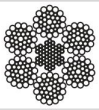
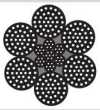
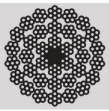
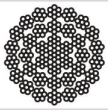
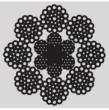
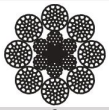
MESH CHARACTERISTIC BY CELLS SIZE:

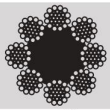
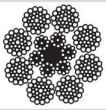
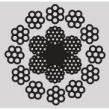
Mesh number	Nominal size of cells one side, mm	Maximum deviation of cells one side, mm	Diameter of wire, mm	Type of mesh
40	38	±1,1	3,0	CC
50	50	±1,5	5,0	CC

The mesh is delivered in cards: length of the card 2 meters and width of the card 1,2 meters.

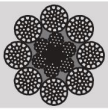
STEEL WIRE ROPES

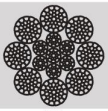
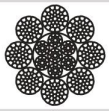
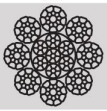
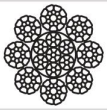
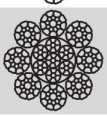
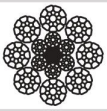
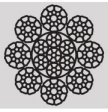
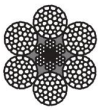
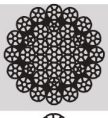
Schematic drawing	Trademark	Standard	Construction	Application
	STS 3052	EN 12385-4 ISO 2408 DIN 3052 GOST 3062	1x7(1+6)	seizing ropes, guy ropes, shrouds, guides for overhead circuits
	STS 3053	EN 12385-4 ISO 2408 DIN 3053 GOST 3063	1x19(1+6+12)	ropes for cable ways, crane ropes, ropes for auto industry, ropes for lightning protection
	STS 3054	EN 12385-4 ISO 2408 DIN 3054 GOST 3064	1x37(1+6+12+18)	ropes for power transmission lines, guy ropes for supports
	STS 3055.1	EN 12385-4 ISO 2408 DIN 3055 GOST 3069	6x7(1+6)+FC	ropes for cable-ways, cable cranes, shipping and hauling ropes
	STS 3055.3	EN 12385-4 ISO 2408 DIN 3055 GOST 3066	6x7(1+6)+WSC	ropes for cars and computers
	STS 3057.1	EN 12385-4 ISO 2408 DIN 3057 GOST 7665	6x25(1+6;6F+12)+FC	ropes for hoisting transport machines, crane ropes
	STS 3057.2	EN 12385-4 ISO 2408 DIN 3057 GOST 7667	6x25(1+6;6F+12)+IWRC	ropes for hoisting transport machines, crane ropes
	STS 3058.1	EN 12385-4 ISO 2408 DIN 3058 GOST 3077	6x19(1+9+9)+FC	ropes for hoisting-transport machines, ropes for elevators, for cable-ways
	STS 3058.2	EN 12385-4 ISO 2408 DIN 3058 GOST 3081	6x19(1+9+9)+IWRC	ropes for hoisting-transport machines, ropes for elevators, for cable-ways
	STS 3059.1	EN 12385-4 ISO 2408 DIN 3059 GOST 2688	6x19(1+6+6/6)+FC	ropes for hoisting transport machines
	STS 3059.2	EN 12385-4 ISO 2408 DIN 3059 GOST 14954	6x19(1+6+6/6)+IWRC	ropes for hoisting transport machines
	STS 3060.1	EN 12385-4 ISO 2408 DIN 3060 GOST 3070	6x19(1+6+12)+FC	slings, tow and raft attachments
	STS 3060.2	EN 12385-4 ISO 2408 DIN 3060	6x19(1+6+12)+IWRC	slings, tow and raft attachment
	STS 3060.3	EN 12385-4 ISO 2408 DIN 3060 GOST 3067	6x19(1+6+12)+WSC	slings, tow and raft attachment
	STS 3061.2	EN 12385-4 ISO 2408 DIN 3061	8x25(1+6+6F+12)+IWRC	ropes for hoisting transport machines

Schematic drawing	Trademark	Standard	Construction	Application
	STS 3062.1	EN 12385-5 ISO 2408 DIN 3062	8x19(1+9+9)+FC	ropes for elevators and hoisting transport machines
	STS 3062.2	EN 12385-5 ISO 2408 DIN 3062	8x19(1+9+9)+IWRC	ropes for elevators and hoisting transport machines
	STS 3063.2	EN 12385-4 ISO 2408 DIN 3063	8x19(1+6+6/6+12)+IWRC	ropes for hoisting transport machines
	STS 3064.1	EN 12385-4 ISO 2408 DIN 3064 GOST 7668	6x36(1+7+7/7+14)+FC	ropes for hoisting-transport machines, mining ropes for hoisting plants
	STS 3064.2	EN 12385-4 ISO 2408 DIN 3064 GOST 7669	6x36(1+7+7/7+14)+IWRC	ropes for excavators, guy ropes
	STS 3066.1	EN 12385-4 ISO 2408 DIN 3066 GOST 3071	6x37(1+6+12+18)+FC	slings, ropes for stoppage of cargo handling
	STS 3066.2	EN 12385-4 ISO 2408 DIN 3066 GOST 3068	6x37(1+6+12+18)+IWRC	slings, ropes for stoppage of cargo handling
	STS 3066.3	EN 12385-4 ISO 2408 DIN 3066	6x37(1+6+12+18)+WSC	slings, ropes for stoppage of cargo handling
	STS 3067.2	EN 12385-4 ISO 2408 DIN 3067	8x36(1+7+7/7+14)+IWRC	ropes for hoisting transport machines
	STS 3069.1	EN 12385-4 ISO 2408 DIN 3069 FE GOST 7681	18x7(1+6)+FC	multi-purpose lifting ropes
	STS 3069.2	EN 12385-4 ISO 2408 DIN 3069 SE	18x7+WC	multi-purpose lifting ropes
	STS 3071.1	EN 12385-4 ISO 2408 DIN 3071 FE	36x7(1+6)+FC	load-lifting not-rotating ropes
	STS 3071.2	EN 12385-4 ISO 2408 DIN 3071 SE	36x7(1+6)+WSC	load-lifting not-rotating ropes
	STS 010	EN 12385-6	8x36(1+7+7/7+14)+IWRC	mining lifting ropes for vertical shafts, hauling and lifting ropes for excavators
	STS 010 MP8	EN 12385-6	8xK36(1+7+7/7+14)+IWRC type Metalplast 8	mining lifting ropes for vertical shafts, hauling and lifting ropes for excavators
	STS 011	EN 12385-6	6x36(1+7+7/7+14)+IWRC	mining lifting ropes for vertical shafts
	STS 043	EN 12385-6	6x36(1+7+7/7+14)+IWRC	mining lifting ropes for vertical shafts

Schematic drawing	Trademark	Standard	Construction	Application
	STS 049	EN 12385-6	6x36(1+7+7/7+14)+EPIWRC type Metalplast	ropes for vertical shaft multi-rope – and single-rope hoisting plants with friction pulleys and hoisting plants with drum machines, as well as for other excavators and lifting machines, as agreed
	STS 096 8MP	EN 12385-6	6x36(1+7+7/7+14)+EPIWRC type Metalplast 6	ropes for vertical shaft multi-rope – and single-rope hoisting plants with friction pulleys and hoisting plants with drum machines, as well as for other excavators and lifting machines, as agreed
	STS 1444	TU 1444	6x36(1+7+7/7+14)+FC	galvanized ropes for shaft lifting multi-ropes engines
	STS 448	TU 448	8x31(1+6+6/6+12)+FC	ropes for car dumper of tower type
	STS 722	TU 722	8x36(1+7+7/7+14)+IWRC	ship crane hoisting rope
	STS 16853.1	GOST 16853	6x31(1+6+6/6+12)+FC	drilling ropes for oil and gas extraction
	STS 16853.2	GOST 16853	6x31(1+6+6/6+12)+IWRC	drilling ropes for oil and gas extraction
	STS 16828	GOST 16828	12x7(1+6)+IWRC	ropes for mining equipment
	STS 3088	GOST 3088	18x19(1+6+6/6)+FC	mining ropes for equipment hanging, balancing ropes

COMPACTED STRAND STEEL WIRE ROPES type K

	STS 010 8K	EN 12385-6	8xK36(1+7+7/7+14)+EPIWRC type 8K	mining lifting ropes for vertical shafts, hauling and lifting ropes for excavators
	STS 010 MP8K	EN 12385-6	8xK36(1+7+7/7+14)+EPIWRC type Metalplast 8K	mining lifting ropes for vertical shafts, hauling and lifting ropes for excavators
	STS 033	EN 12385-6	6xK19(1+9+9)+FC	ropes for inclined shaft
	STS 089.1	EN 12385-4	6xK36(1+7+7/7+14)+FC	ropes for various load-lifting machinery, including excavators

Schematic drawing	Trademark	Standard	Construction	Application
	STS 089.2	EN 12385-4	6xK36(1+7+7/7+14)+IWRC(K)	ropes for various load-lifting machinery, including excavators
	STS 091.1	EN 12385-4	6xK31(1+6+6/6+12)+FC	ropes for mining equipment
	STS 091.2	EN 12385-4	6xK31(1+6+6/6+12)+IWRC(K)	ropes for mining equipment
	STS 092.1	EN 12385-4	8xK36(1+7+7/7+14)+IWRC(K)	ropes for various load-lifting machinery, including: excavators, drilling rigs, metallurgical and port cranes, fishing ships
	STS 092.2	EN 12385-4	8xK36(1+7+7/7+14)+IWRC(K)	ropes for various load-lifting machinery, including: excavators, drilling rigs, metallurgical and port cranes, fishing ships
	STS 092.3	EN 12385-4	8xK31(1+6+6/6+12)+IWRC(K)	ropes for various load-lifting machinery, including: excavators, drilling rigs, metallurgical and port cranes, fishing ships
	STS 092.4	EN 12385-4	8xK26(1+5+5/5+10)+IWRC(K)	ropes for various load-lifting machinery, including: excavators, drilling rigs, metallurgical and port cranes, fishing ships
	STS 092.5	EN 12385-4	8xK26(1+5+5/5+10)+IWRC(K)	ropes for various load-lifting machinery, including: excavators, drilling rigs, metallurgical and port cranes, fishing ships
	STS 092.6	EN 12385-4	8xK19(1+9+9)+IWRC(K)	ropes for various load-lifting machinery, including: excavators, drilling rigs, metallurgical and port cranes, fishing ships
	STS 092.7	EN 12385-4	8xK19(1+9+9)+IWRC(K)	ropes for various load-lifting machinery, including: excavators, drilling rigs, metallurgical and port cranes, fishing ships
	STS 092.8	EN 12385-4	8xK19(1+9+9)+IWRC(K)	ropes for various load-lifting machinery, including: excavators, drilling rigs, metallurgical and port cranes, fishing ships
	STS 092.9	EN 12385-4	8xK19(1+9+9)+IWRC(K)	ropes for various load-lifting machinery, including: excavators, drilling rigs, metallurgical and port cranes, fishing ships
	STS 096 MP6K	EN 12385-6	6xK36(1+7+7/7+14)+EPIWRC type Metalplast 6K	ropes for vertical shaft multi-rope – and single-rope hoisting plants with friction pulleys and hoisting plants with drum machines, as well as for other excavators and lifting machines, as agreed
	STS 100	EN 12385-4 EN 12385-6	16xK7(1+6)+EPIWRC(K)	multi-strended non-rotating steel for operation on hoisting units, job cranes
	STS 101	EN 12385-4	8xK26(1+5+5/5+10)+EPIWRC(K)	ropes for various load-lifting machinery, including excavators

And also STEEL SLINGS, accessories for slings (hooks, thimbles for steel ropes, steel chain and other).

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