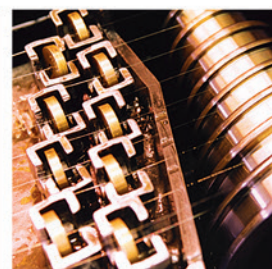


Wire and wire products

PRODUCT CATALOGUE



1	Information about Mechel and its wire and wire products producers	4
2	Materials for concrete reinforcement	5
	Low relaxation three side indented wire	5
	Fibre	5
	Prestressed concrete (PC) wire ropes	6
	7-low relaxation PC wire rope	6
	3-low relaxation PC wire rope	6
3	Wire for welding	8
	Welding coppered wire	8
4	Wire for spring manufacturing	8
5	Grinded bars	9
6	Wire for general purposes	10
	Bright (drawn) low-carbon wire	10
	Black annealed low-carbon wire	10
	Galvanized low-carbon wire	10
7	Quality wire	12
	Steel rope wire	12
8	Wire mesh	13
	Bright/galvanized woven mesh	13
9	Sales	16
	Producers	16
	Sales branch	17

Mechel's production facilities



Information about Mechel

and its wire and wire products producers

Founded in 2003, Mechel is one of Russia's leaders in both mining and steelmaking. The company comprises producers of coal, iron ore concentrate, ferroalloys, steel, rolled steel, wire and wire products, heat and electric power. Mechel's production facilities are located in 11 of Russia's regions and abroad. Mechel also owns three trading ports and its own transport operator. Mechel markets its products both domestically and internationally. The company's steel facilities produce and supply steel billets, carbon and special steel long products, carbon and stainless steel flat products (including high added value steel products, such as closed die and open die forgings). The company can also produce various grades of steel within these groups of products to meet the specific demands of individual customers.

The following Mechel-owned facilities are engaged in wire and wire products production:

Beloretsk Metallurgical Plant

Beloretsk, Republic of Bashkortostan, Russia

PAO "BMP" is the leader of hardware market in Russia. BMP product range includes steel wire of high quality steels – carbon, alloyed and stainless, steel ropes of different constructions, galvanized and without coating, with polymer coating, bands of different sizes and profiles, nails, load-handling devices. BMP's products are used in all industries, particularly in fuel and energy, machine-building, construction, and military.

Building partnerships with suppliers and studying the market, BMP improves quality of products and services, as well as develops new types of products allowing consumers to reduce operating costs significantly. Thanks to the active policy of products quality assurance in national expert organizations of the countries in which the products are sold, the company has additional advantages in the international market. Thus, the most popular products of BMP have official permission for their technical applications in Hungary, Slovakia, Belarus.

67 International and Russian certificates are issued for BMP products, part of certificated products is about 47 per cent. Since 2003 Beloretsk Metallurgical Plant holds the ISO 9001:2015 international quality management certificate on to present.

Vyartsilya Metal Products Plant

Vyartsilya, Republic of Karelia

Vyartsilya Metal Products Plant produces low-carbon wire of 0.8–6.8 mm in diameter, nails, steel wire mesh and polymer-coated wire mesh.

Mechel Nemunas

Kaunas, Lithuania

Mechel Nemunas is a steel facility specializing in wire and wire products production. It is the only enterprise in Lithuania which produces fibre. The plant's product range includes wire, nails and mesh. Products are mostly supplied to EU-based customers.

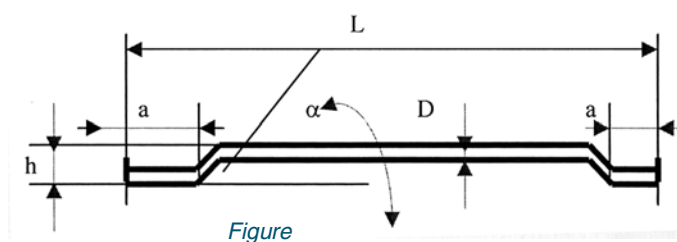


Materials for concrete reinforcement

LOW RELAXATION THREE SIDE INDENTED (PC) WIRE

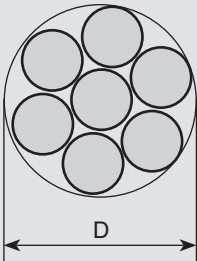
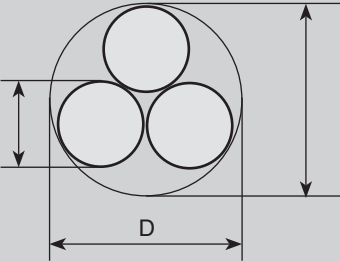
Nominal bar diameter, mm	Tensile strength, N/mm ²	Standard	Producer
4.0; 5.0	1770; 1670	pr EN 10138–2: 2006	BELORETSK METALLURGICAL PLANT

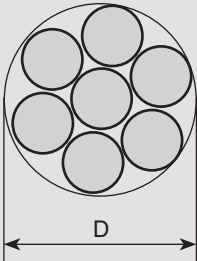
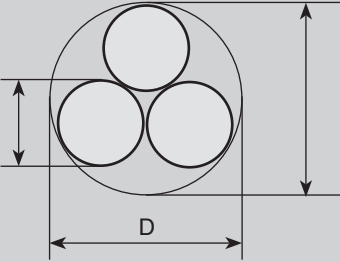
FIBRE



Diameter (D), mm	Length (L), mm	Tensile strength, N/mm ²	Standard	Steel grade	Producer
1.0x50.0	50.0	1000–1300	EN 14889–1	SAE1006; SAE1008	MECHEL NEMUNAS

PRESTRESSED CONCRETE (PC) WIRE ROPES

Product	Diameter (D), mm	Maximum deviation in mass is 1 m from nominal, %	Breaking strength, min, kN			Standard	Tensile strength, N/mm ²	Producer
<div>7-low relaxation PC wire rope</div> <div></div>	9.0	±2	88.5; 93.0			pr EN 10138–3: 2006	1770; 1860	BELORETSK METALLURGICAL PLANT
	9.3		92.0; 96.7				1770; 1860	
	9.6		97.4; 102.0				1770; 1860	
	11.0		124.0; 130.0				1770; 1860	
	12.5		165.0; 173.0				1770; 1860	
	12.7		175.0; 184.0				1770; 1860	
	12.9		177.0; 186.0				1770; 1860	
	15.2		232.0; 246.0; 259.0				1670; 1770; 1860	
<div>3-low relaxation PC wire rope</div> <div></div>	6.5	±2	39.4			pr EN 10138–3: 2006	1860	BELORETSK METALLURGICAL PLANT
	6.9		43.5					
	8.6		69.6					

Product	Diameter (D), mm	Maximum deviation in mass is 1 m from nominal, %	Breaking strength, min, kN			Standard	Tensile strength, N/mm ²	Producer
<div>7-low relaxation PC wire rope</div> <div></div>	9.0	±2	88.5; 93.0			pr EN 10138–3: 2006	1770; 1860	BELORETSK METALLURGICAL PLANT
	9.3		92.0; 96.7				1770; 1860	
	9.6		97.4; 102.0				1770; 1860	
	11.0		124.0; 130.0				1770; 1860	
	12.5		165.0; 173.0				1770; 1860	
	12.7		175.0; 184.0				1770; 1860	
	12.9		177.0; 186.0				1770; 1860	
	15.2		232.0; 246.0; 259.0				1670; 1770; 1860	
<div>3-low relaxation PC wire rope</div> <div></div>	6.5	±2	39.4			pr EN 10138–3: 2006	1860	BELORETSK METALLURGICAL PLANT
	6.9		43.5					
	8.6		69.6					

Wire for welding

WELDING COPPERED WIRE

Diameter, mm	Standard for steel product	Steel grade	Standard for chemical composition	Producer
0.8; 1.0; 1.2	DIN EN ISO 14341:2011	G3Si1	DIN EN ISO 14341:2011	BELORETSK METALLURGICAL PLANT

Wire for spring manufacturing

Diameter, mm	Tencile strength, N/mm ²	Standard for steel product	Steel grade	Standard for chemical composition	Producer
0.2–6.0	as per EN 10270–1	EN 10270–1	medium and high carbon steel; tool steel	EN ISO 4957	BELORETSK METALLURGICAL PLANT

Grinded bars

Diameter, mm	Standard for steel product	Steel grade	Standard for chemical composition	Product application	Producer
1.0–14.0 (low-alloyed steel)	ASTM 681	A2; O1; O2; H13; S5; S7; L6	ASTM 681	for cutting and stamping tools and machine parts	BELORETSK METALLURGICAL PLANT
1.0–14.0 (high-speed steel)	ASTM A600	M1; M2; M7; T1	as per Producer's technical specification	for cutting tool	
	DIN EN ISO 4957	1.3243; 1.3343; 1.3390; 1.3392			

Wire for general purposes

BRIGHT (DRAWN) LOW-CARBON WIRE

Diameter, mm	Tensile strength, N/mm ²	Standard for steel product	Steel grade			Standard for chemical composition	Product application	Producer
0.9–10.0	440–1180	STAS 889; EN 10218	SAE 1006; SAE 1008			ASTM A 510M	for nail manufacturing, packing, fences and other purposes	MECHEL NEMUNAS
1.0–1.8	1000–1200	EN 10218–2 (DIN 177)						
2.0–6.0	590–830							
2.0–6.0	590–830	EN 10218–2 (DIN 177)	SAE 1006; SAE 1008			ASTM A 510M	wire with improved surface to be galvanized	VYARTSILYA METAL PRODUCT PLANT

BLACK ANNEALED LOW-CARBON WIRE

0.9–8.0	max 450	EN 10218	SAE 1006; SAE 1008			ASTM A 510M	for mesh manufacturing, packing, fences and other purposes	MECHEL NEMUNAS
1.0–6.0	290–490	EN 10218–2 (DIN 177)						

GALVANIZED LOW-CARBON WIRE

1.8–6.0	–	EN 10244–2; (DIN 1548)	SAE 1006; SAE 1008			ASTM A 641–71a	for packing, fences and other purposes	MECHEL NEMUNAS
---------	---	------------------------	--------------------	--	--	----------------	--	----------------

Wire for general purposes

STEEL ROPE WIRE

Diameter, mm	Tensile strength, N/mm ²	Standard for steel product	Steel grade			Standard for chemical composition	Product application	Producer
0.18–3.50 (zinc coated); 0.18–4.00 (bright)	as per to EN 10264–2	EN 10264–2	C42D2–C86D2			EN 10016–4	for rope manufacturing	BELORETSK METALLURGICAL PLANT

BRIGHT/GALVANIZED WOVEN MESH

Mesh No	Dimensions			Mass of 1 m ² , kg			Standart for steel product	Steel grade	Product application	Producer
	Wire diameter, mm	Coil width, mm	Coil length, m							
25	2.0	800–2000	10.0; 12.5; 15.0; 20.0; 25.0	2.15			EN 10223–6	C4D; C7D; SAE1006; SAE1008	for fences, thermal protection, reinforcement of mine openings, material screening	MECHEL NEMUNAS
25	2.5			3.36						
35	2.0			1.56						
35	2.5			2.32						
45	2.2			1.45						
45	2.5			1.87						
45	3.0	800–2000	10.0; 12.5; 15.0; 20.0; 25.0	2.57						
50	2.2			1.25						
50	2.5			1.61						
50	3.0			2.30						
60	3.0			1.90						

Mechel's Sales Network



One of Mechel's important competitive advantages lies in its sales policy, based on its effort to creating long-term partnership ties with the company's clients and meeting their needs in steel products and services as fully as possible. We can fulfill any order regardless of size and complexity. Our clients can order various steel products made from an assortment of special steels.

For our clients' convenience and to increase the efficiency of our sales, we created the international sales network **Mechel Service Global B.V.**, which focuses on marketing our steel products domestically as well as in Europe and the CIS member states. In addition to sales of steel products, the company offers a wide range of services within at its storage facilities.

The company's headquarters are located in the Hague (the Netherlands). They function as a coordination center for steel product sales and ensure efficient interaction between our clients and Mechel Group's steel producers.

The extensive sales network, with its highly proficient staff, storage infrastructure, sweeping product range and sufficient stores, allows us to fulfill our clients' needs fully and promptly.

PRODUCERS

COMPANY	Address	Tel / Fax	E-mail
BELORETSK METALLURGICAL PLANT	1, Blyukhera ul., Beloretsk, Bashkortostan Republic, 453500, Russian Federation	Tel./Fax: +7 (34792) 4 10 33 +7 (34792) 3 10 77	belmet@belmk.ru
VYARTSILYA METAL PRODUCTS PLANT	1, Zavodskaya ul., Vyartsilya, Karelia Republic, Russian Federation, 186757	Tel.: +7 (81430) 3 23 84 3 27 17 Fax: +7 (81430) 3 23 84 3 22 33	subbotina@mechelgroup.ru
MECHEL NEMUNAS	Kalantos str., 83 52308, Kaunas, Lithuania	Tel.: +370 37 49 05 55 Fax: +370 37 49 05 56	nemunas@nemunas.lt www.mechelnemunas.lt

SALES BRANCH

COMPANY	Address	Tel / Fax	E-mail
MECHEL SERVICE GLOBAL B.V. Head Office	Parkstraat, 20 2514 JK, The Hague, The Netherlands	Tel.: +31 70 844 00 00 Fax: +31 70 844 00 01	msglobal@mechel.com
Mechel-Service (RUSSIA) www.mechelservice.ru	35, Mishina street 127083, Moscow, Russia	Tel. / Fax: +7 (495) 739 98 80 Call-centre: +7 800 700 95 50 (calls in Russia are free)	ms@mechel.com
Mechel Service AUSTRIA	Lunzenstrasse 105, 4021 Linz, Austria	Tel.: +43 732 6925 0 Fax: +43 732 6924 1000	office@ ms-stahlhandel.at
Mechel Service Bel (BELARUS)	7, Ignatenko street 220035, Minsk, Republic of Belarus	Tel.: +375 17 226 66 38 +375 17 203 92 12	belarus@mechel.com evgeniy.beloborodov@ mechelservice.ru
Mechel Service BELGIUM	Generaal Lemanstraat, 27 2018, Antwerp, Belgium	Tel.: +32 3 259 02 00 Fax: +32 3 259 02 09	info.msbelgium@mechel.com
HBL Holding (GERMANY)	Auf den Kämpfen 20 59071 Hamm-Uentrop, Deutschland	Tel.: +49 02381 30033-0 Fax: +49 02381 30033-31	holding@hbl.de hamm@hbl.de
Mechel Service KAZAKHSTAN www.mechelservice.kz	Abay pr. (Radostovca ul.), 151/115, Alatau Business Centre, off. 309 050009, Almaty, Rep. of Kazakhstan	Tel. / Fax: +7 (727) 391 16 50/51/52	mechel_astana@mechel.com
Mechel Service Stahlhandel CZECH REPUBLIC s.r.o.	Prumislava 461, 53003, Pardubice, Czech Republic	Tel.: +420 46 6047 111 Fax: +420 46 6047 170	info@ms-stahlhandel.cz



www.mechel.com