



RED OCTOBER

PRODUCT CATALOGUE



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CONTENT

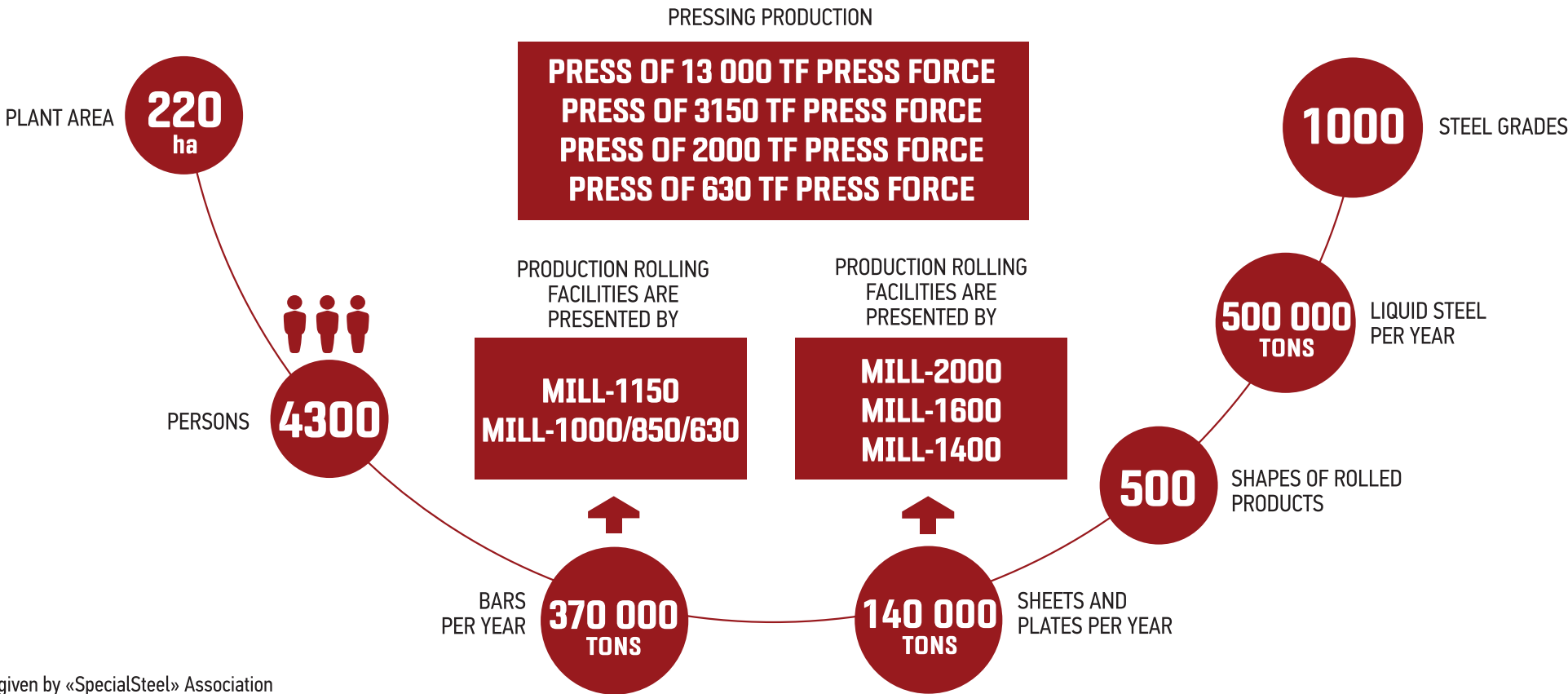
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«Krasny oktyabr Corporation» JSC is one of the largest manufacturers of stainless steel rolled products in the country*

The metallurgical plant had been established in 1897 by the French Joint-Stock Ural-Volga Steel Company on the skirts of the town of Tsaritsyn, and in November 1898 the first open-hearth furnace has been put into operation. In the postwar period, the plant obtained its current structure and final specialization in production. The main production facilities were put into operation in the 50's – 70's. Modernization of rolling and steelmaking equipment, implementation of new production technologies, improvement of quality control system became the basis for further changes.

At present, «Krasny oktyabr Corporation» JSC is a modern, consistently developing enterprise. The plant is occupied with constantly updating equipment, purchasing new equipment and machines as well as improving production technologies. Considerable attention is paid to social policy issues: comfortable working conditions are created, corporate events are held, and the territory adjacent to the plant is landscaped.

Sales Directorate of «Krasny oktyabr Corporation» JSC is carried out the sales of rolled products.



*Data given by «SpecialSteel» Association

ADVANTAGES OF THE ENTERPRISE:

-  Convenient economic and geographical location of the region (M-6, M-21, P-228, P-221, A-153 federal roads; North-South transport corridor), transport accessibility (automobile, railway, river and sea transport)
-  Proximity to the following ports: Volzhsky commercial port, Kalach river port
-  Steel grades are manufactured by means of electroslag remelting
-  Heavy Billet Mill (where it is possible to roll the rounds from 60 to 360 mm in diameter)
-  Modern turning machines are the following: PL-370, PL-210
-  Production of small tonnage batches (from 5 tons)
-  Check Test Shop
-  Testing areas
-  Volkograd State Technical University is a basic technical higher education institution engaged in training of personnel

Applicable quality management system (QMS) is in accordance with ISO 9001:2015 international standard
Certificate of conformity with the requirements of standards GOST R ISO 9001-2015 and GOST RV 0015-002-2020 issued by Certification Center "MONOLIT-Cert" and acceptable by Rosoboronzakaz, Rosstandart and "Rosatom" State corporation
Certificate of manufacturer of materials used in construction according to the standards 305/2011/EU (EN 10088-5:2009) and 305/2011/EU (EN 10025-5:2009)
Approval certificate of manufacturer of shipbuilding steels of normal and higher strength as well as corrosion-resistant steel products
Environmental management system is in accordance with ISO 14001:2015 international standard



HOT ROLLED ROUND BARS



RANGE OF PRODUCTS	SHAPE		TECHNICAL REQUIREMENTS FOR CHEMICAL COMPOSITION AND RANGE OF PRODUCTS
	DIAMETER, MM	LENGTH, MM	
Stainless steel	GOST 5949-2018		
	60...200, turned rounds	2400...6000	Requirements for geometry: GOST 2590 (B1), hot rolled bars, annealing Requirements for surface quality: GOST 5949 (2ГП, 3ГП)
	65...200, unturned rounds	2400...6000	As agreed by the parties
	210...320, turned rounds	3400...6000	
Corrosion- and heat-resistant special purpose steel	60...250, turned rounds	3400...6000	Requirements for geometry: GOST 2590 (B1), hot rolled bars, quenching As agreed by the parties for the rounds over 200 mm in diameter Requirements for surface quality: GOST 5949 (2ГП, 3ГП)
Structural bearing steel	GOST 801-2022		
	65...250, unturned rounds	2400...6000	Requirements for geometry: GOST 2590 (B1), hot rolled bars, annealing Requirements for surface quality: GOST 801 (OX)
	65...250, turned rounds	3400...6000	Requirements for geometry: GOST 2590 (B1), hot rolled bars, annealing Requirements for surface quality: GOST 801 (OF, OX)
Structural alloy and nickel-containing steel	GOST 4543-2016		
	65...270, unturned rounds	2400...6000	Requirements for geometry: GOST 2590 (B1), hot rolled bars, annealing Requirements for surface quality: GOST 4543 (2ГП, 3ГП)
	over 250...350, unturned rounds	2400...6000	Requirements for geometry and other technical requirements acc. to TU 14-1-2118 Requirements for surface quality: GOST 4543 (2ГП, 3ГП)
	60...270, turned rounds	3400...6000	Requirements for geometry: GOST 2590 (B1), hot rolled bars, annealing; TU 14-1-2118-98 is applicable for the rounds of 250 mm and over in diameter Requirements for surface quality: GOST 4543 (1ГП, 2ГП, 3ГП)
	over 250...340, turned rounds	3400...6000	As agreed by the parties
	GOST 20072-74		
	65...200, unturned rounds	2400...6000	Requirements for geometry: GOST 2590 (B1), hot rolled bars, annealing Requirements for surface quality: GOST 20072 (subgroup a and 6)
	60...200, turned rounds	3400...6000	Requirements for geometry: GOST 2590 (B1), hot rolled bars, annealing Requirements for surface quality: GOST 20072 (subgroup a and 6)
	over 200, turned/unturned rounds		As agreed by the parties

STEEL GRADES	EQUIVALENT FOREIGN STANDARDS	
	European standards (DIN, EN)	US standards (ASTM/AISI)
08X13, 12X13, 20X13, 30X13, 40X13, 08X14MΦ, 08X14MΦ-Ш, 40X902, 40X10C2M, 14X17H2, 15X11MΦ-Ш, 07X16H6-Ш, 15X13H2, 08X13H4M1Φ-1	1.4000/X6Cr13, 1.4006/X12Cr13, 1.4021/X20Cr13, 1.4028/X30Cr13, 1.4718/X45CrSi9-3, 1.4031/X39Cr13, 1.4034/X46Cr13, 1.4541/X6CrNiTi18-10, 1.4057/X17CrNi16-2, 1.4731/X40CrSiMo10-2, 1.4571/X6CrNiMoTi17-12-2, 1.4878/X8CrNiTi18-10, 1.4301/X5CrNi18-10, 1.4307/X2CrNi18-9, 1.4310/X10CrNi18-8 and etc.	321, 316,316Ti, 304,304L, 301 and etc.
06X14H6Д2МБТ-Ш (ЭП 817-Ш), 07X12HMБΦ-Ш (ЭП 609-Ш), 15X12H2MBΦАБ-Ш (ЭП 517-Ш), 13X11H2B2MΦ-Ш (ЭИ961Ш)		
08X18H10T, 08X17H13M2T, 08X17H6T, 10X17H13M2T, 10X17H13M3T, 12X18H10T, 08X22H6T, 08X18H10T-Y, 08X18H10T-Ш, 12X18H12T, 07X16H6-Ш		
ШX15-B, ШX15CF-B, ШX15-Ш, ШX20CF-B	1.2067/102Cr6, 1.3505/100Cr6, 1.3520/100CrMnSi6-4	52100, 2 (A485)
15XA, 20X, 30X, 35X, 40X, 45X, 50X, 25XГМ, 38XГМ, 18XГ, 18XГТ, 25XГТ, 30XГТ, 33X0,38X0,40X0,15XM, 20XM, 30XM, 35XM, 38XM, 40XMΦA, 12XH3A, 20XH3A, 30XH3A, 15XГH2TA, 12X2H4A, 20X2H4A, 20XГHM, 40XГHM, 40XH2MA, 38X2MЮA, 10Г2, 20XГP, 30X3MΦ, 30XMA, 40XΦA, 20XH, 40XH, 45XH, 50XH, 20XHP, 12XH2, 20XГCA, 25XГCA, 30XГCA, 35XГCA, 30XГC, 30XГCH2A, 20XГHP, 20XГHTP, 19XГH, 20XH2M, 38XH3MA, 18X2H4MA, 38XH3MΦA, 30XH2MA, 38X2H2MA, 40X2H2MA, 30XH2MΦA, 25XГHMT	1.6587/18CrNiMo7-6, 1.6580/30CrNiMo8, 1.1148/C16E, 1.1133/20Mn5, 1.1170/28Mn6, 1.1157/40Mn4, 1.0912/46Mn7, 1.7016/17Cr3, 1.7030/28Cr4, 1.7033/34Cr4, 1.7035/41Cr4, 1.7045/42Cr4, 1.7131/16MnCr5, 1.7337/16CrMo4-4, 1.7255/23CrMo5, 1.7258/24CrMo5, 1.7218/25CrMo4, 1.7216/30CrMo4, 1.7220/34CrMo4, 1.7223/41CrMo4, 1.1109/12Mn5, 1.6563/41NiCrMo7-3-2, 1.7707/30CrMoV9, 1.8519/31CrMoV9, 1.7225/42CrMo4, 1.6582/34CrNiMo6, 1.6565/40NiCrMo6, 1.8509/41CrAlMo7-10, 1.6523/20NiCrMo2-2, 1.5752/15NiCr13, 1.5711/40NiCr6, 1.6657/14NiCrMo13-4	5135, 1513, 4137, 8640, 5145, 1016, 1330, 5115, 5120, 5140, 5130, 4130, 4140, 4142, 4320, 4330, 4340, E3310, 8617, 8620, 8740, 1026, 5150, 6135, 3135
12X1MΦ, 25X1MΦ, 20X3MBΦ, 15X5M, 12MX		

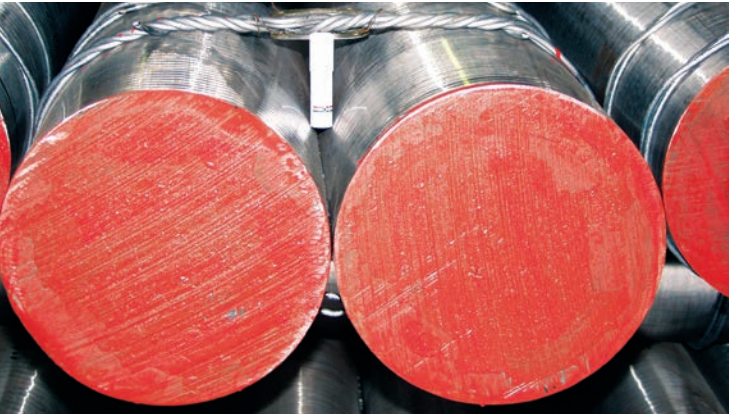
HOT ROLLED ROUND BARS



RANGE OF PRODUCTS	SHAPE		TECHNICAL REQUIREMENTS FOR CHEMICAL COMPOSITION AND RANGE OF PRODUCTS
	DIAMETER, MM	LENGTH, MM	
Non-alloy and alloy spring steel	GOST 14959-2016		
	65...270, unturned rounds	2400...6000	Requirements for geometry: GOST 2590 (B1), hot rolled bars, annealing
			Requirements for surface quality: GOST 14959 (2ГП, 3ГП)
	60...270, turned rounds	3400...6000	Requirements for geometry: GOST 2590 (B1), hot rolled bars, annealing
			Requirements for surface quality: GOST 14959 (2ГП, 3ГП)
			Requirements for the rounds of over 200 mm in diameter shall be as agreed by the parties
Structural quality non-alloy steel	GOST 1050-2013		
	65...270, unturned rounds	2400...6000	Requirements for geometry: GOST 2590 (B1), hot rolled bars, annealing
			Requirements for surface quality: GOST 1050-2013 (2ГП, 3ГП)
	60...270, turned rounds	3400...6000	Requirements for geometry: GOST 2590 (B1), hot rolled bars, annealing
			Requirements for surface quality: GOST 1050-2013 (1 ГП, 2ГП, 3ГП)
	over 250 up to 350, unturned rounds	2400...6000	Requirements for geometry and other technical requirements acc. to TY 14-1-2118, hot rolled, heat treated bars
			Requirements for surface quality: GOST 1050-2013 (2ГП, 3ГП)
	over 250 up to 350, turned rounds	3400...6000	As agreed by the parties
Commercial quality carbon steel	GOST 535-2005 (chemical composition acc. to GOST 380-2005)		
	65...270, unturned rounds	2400...6000	Requirements to the geometry: GOST 2590 (B1), hot rolled bars, annealing
			Requirements to the surface quality: GOST 535 (2ГП, 3ГП)
	60...340, turned rounds	3400...6000	Requirements to the geometry: GOST 2590 (B1), hot rolled bars and for the rounds over 270 mm in diameter as agreed by the parties, annealing
			Requirements for surface quality: GOST 535 (1ГП, 2ГП, 3ГП)
	GOST 1050-2013		
	65...340, unturned rounds	2400...6000	Requirements for geometry: GOST 2590 (B1), hot rolled bars, annealing; TU 14-1-2118-98 is applicable for the rounds of 250 mm and over in diameter
			Requirements for surface quality: GOST 1050 (2ГП, 3ГП)
70...340, turned rounds	3400...6000	Requirements for geometry: GOST 2590 (B1), hot rolled bars, annealing; TU 14-1-2118-98 is applicable for the rounds of 250 mm and over in diameter	
		Requirements for surface quality: GOST 1050 (1ГП, 2ГП, 3ГП)	

STEEL GRADES	EQUIVALENT FOREIGN STANDARDS	
	European standards (DIN, EN)	US standards (ASTM/AISI)
60Г, 65Г, 70Г, 55C2, 55C2A, 60C2, 60C2A, 50ХФА, 50ХГФА, 60C2ХФА	1.1740/C60W, 1.8159/51CrV4, 1.5026/56Si7, 1.1231/C67S	1561, 1566, 1572, 9255, 9260, 6150
45XH2MФА-Ш, 40XH2MA-Ш, 38X2MЮA-Ш, 30XMA-Ш, 40XФА-Ш, 40XC-Ш, 20X2H4A-Ш, 38XH3MA-Ш, 38XH3MФА-Ш, 25XГCA-Ш, 30XГCA-Ш, 12XH3A-Ш, 20XH3A-Ш, 18X2H4BA-Ш		
Cr3cn, Cr5cn	1.0037/St 37-2, 1.0050/St 50-2	A570 GR 36, A570 GR 50
10, 15, 20, 25, 30, 35, 40, 45, 50, 55, 60	1.1121/C10E, 1.1141/C15E, 1.1151/C22E, 1.1158/C25E, 1.1178/C30E, 1.1181/C35E, 1.1186/C40E, 1.1191/C45E, 1.1206/C50E, 1.1203/C55E, 1.1221/C60E	1010, 1015, 1020, 1025, 1030, 1035, 1040, 1045, 1050, 1055, 1060
15Г, 20Г, 25Г, 30Г, 35Г, 40Г, 45Г, 50Г	1.6510/39NiCrMo3, 1.7160/16MnCrB5, 1.7147/20MnCr5, 1.7243/18CrMo4, 1.6571/20NiCrMoS6-4	1039, 1046, 1551, 1022, 1525, 1037

HOT ROLLED ROUND BARS



RANGE OF PRODUCTS	SHAPE	
	DIAMETER, MM	LENGTH, MM
Structural and commercial quality carbon steel	GOST 14959-2016	
	65...270, unturned rounds	2400...6000
	60...270, over 270, turned rounds	3400...6000 as agreed by the parties
	GOST 19281-2014	
	65...270, unturned rounds	2400...6000
	70...340, turned rounds	3400...6000
Tool steel	GOST 1435-99	
	65...270, unturned rounds	2400...6000
	60...270, turned rounds	3400...6000
	GOST 5950-2000	
	65...200, unturned rounds	2400...6000
	60...200, turned rounds	3400...6000

TECHNICAL REQUIREMENTS FOR CHEMICAL COMPOSITION AND RANGE OF PRODUCTS	STEEL GRADES	EQUIVALENT FOREIGN STANDARDS	
		European standards (DIN, EN)	US standards (ASTM/AISI)
GOST 14959-2016	65, 70, 75, 80, 85	1.1231/C67S, 1.1248/C75S, 1.1269/C85S	1065, 1070, 1075, 1080, 1084
Requirements for geometry: GOST 2590 (B1), hot rolled bars, annealing			
Requirements for surface quality: GOST 1050 (2ГП, 3ГП, 1ГП (turned))			
Requirements for geometry and other technical requirements for the rounds of 250 mm and over acc. to TU 14-1-2118-98			
Requirements for surface quality: GOST 14959 (2 ГП, 3 ГП)			
GOST 19281-2014	09Г2С, 10ХСНД, 15ХСНД, 12ГС, 17ГС		
Requirements for geometry: GOST 2590 (B1), hot rolled bars, heat treated			
Requirements for surface quality: GOST 535 (2 ГП, 3 ГП)			
Requirements for geometry of the rounds over 270 mm in diameter shall be as agreed by the parties			
Requirements for surface quality: GOST 535 (2 ГП, 3 ГП, 1 ГП (turned))			
GOST 1435-99	У7, У7А, У8, У8А, У9, У9А, У10, У10А, У12, У12А	1.1555/C120U, 1.1620/C70W2, 1.1520/C70U, 1.1625/C80W2, 1.1525/C80U, 1.1535/C90U, 1.1545/C105U, 1.1645/C105W2, 1.1563/C125U	W1, W108, W110, W112
Requirements for geometry: GOST 2590 (B1), hot rolled bars, annealing			
Requirements for surface quality: GOST 1435 (2 ГП, 3 ГП)			
Requirements for geometry: GOST 2590 (B1), hot rolled bars, annealing			
Requirements for surface quality: GOST 1435 (2 ГП, 3 ГП)			
GOST 5950-2000	4Х5МФ1С, ХВГ, 4Х5МФС, 4ХМФС, 3Х3М3Ф, 5ХНМ, 6ХВ2С, 9ХФМ, 9ХФ	1.2419/105WCr6, 1.2343/Х38CrMoV5-1, 1.2714/55NiCrMoV7, 1.2365/Х32CrMoV33, 1.2344/Х40CrMoV5-1, 1.2713/55NiCrMoV6	H13, L6,03,02,01, H11, L2
Requirements for geometry: GOST 2590 (B1), hot rolled bars, annealing			
Requirements for surface quality: GOST 5950 (3ГП, 4ГП)			
Requirements for geometry: GOST 2590 (B1), hot rolled bars, annealing			
Requirements for surface quality: GOST 5950 (2ГП, 3ГП, 4ГП)			

TUBULAR BILLETS



RANGE OF PRODUCTS	SHAPE	
	DIAMETER, MM	LENGTH, MM
Stainless steel; corrosion- and heat-resistant special purpose steel and alloys	up to 230	As agreed according to the specifications
	80...190	
	75...230	
Structural bearing steel	100...230	As agreed according to the specifications
Structural alloy and nickel-containing steel	70...350	As agreed according to the specifications
	up to 270	
	80...270	As agreed according to the specifications
	90...130	As agreed according to the specifications
	80...270	
	85, 105, 140...250	As agreed according to the specifications
Structural and commercial quality carbon steel	70...350	2000...6000
		3500...6000
	80...270	As agreed according to the specifications
	90...150	

TECHNICAL REQUIREMENTS FOR CHEMICAL COMPOSITION AND RANGE OF PRODUCTS	STEEL GRADES	EQUIVALENT FOREIGN STANDARDS	
		European standards (DIN, EN)	US standards (ASTM/AISI)
TU 14-1-565, GOST 5632	20X13, 12X13, 08X13, 15X25T, 08X18H10, 08X18H10T, 12X18H10T, 10X17H13M2T, 15X13H2, 08X13H4M1Φ-1	1.4000/X6Cr13, 1.4006/X12Cr13, 1.4021/X20Cr13, 1.4541/X6CrNiTi18-10, 1.4571/X6CrNiMoTi17-12-2, 1.4057/X17CrNi16-2, 1.4301/X5CrNi18-10, 1.4306/X2CrNi19-11	304, 321, 410, 420, 304L, 316Ti
TU 14-1-1529	12X18H12T, 08X14MΦ		
TU 14-1-3183	03X18H11-B		
TU 14-1-790	08X18H10T, 08X17H13M2T, 08X18H12T, 08X18H10T-Y		
TU 14-1-3911, GOST 801	ШX15-B, ШX15CG-B, ШX15-Ш, ШX20CG	1.3505/100Cr6, 1.3520/100CrMnSi6-4, 1.2067/102Cr6	52100, 2 (A485)
GOST 34636-2020	36Г2С, 37Г2С		
TU 14-1-1529	15ХМ, 12Х1МΦ, 15Х1М1Φ	1.7706/G17CrMoV5-10, 1.7262/15CrMo5	K11562
TU 14-1-3000, GOST 4543	40X, 30XГCA	1.7035/41Cr4	5140
TU 14-1-564, GOST 4543	38X2MЮA, 38X2MЮA-Ш	1.8509/41CrAlMo7-10	K24065
TU 14-1-583, GOST 20072	15X5M, 15X5M-Ш		501
TU 14-1-3000, GOST 4543, GOST 11268	12XH3A, 30XГCH2A, 12X2HБΦA (ЭИ 712), 26X2HBMБP (KBK 26), 32X2HBMБP (KBK 32)	1.5752/15NiCr13	3415
TU 14-1-5.17, GOST 4543	40XH2MA-Ш	1.6511/34CrNiMo4	4340
TU 14-1-5300	38X3MΦA, 38X3MΦA-Ш		
TU 14-1-584	18XГ, 30XMA, 15XΦ, 14XГC	1.7131/16MnCr5, 1.7218/25CrMo4	5115, 4130
TU 14-1-4230	07X3ГHМЮA		
As agreed, GOST 380, GOST 1050, GOST 14959, GOST 19281, GOST 4543	Ст3сп, 10, 15, 20, 25, 30, 35, 40, 45, 50, 55, 60, 70, 09Г2С, 10XCHД, 12Г2A	1.0037/St 37-2, 1.1121/C10E, 1.1141/C15E, 1.1151/C22E, 1.1158/C25E, 1.1178/C30E, 1.1181/C35E, 1.1186/C40E, 1.1191/C45E, 1.1206/C50E, 1.1203/C55E, 1.1221/C60E, 1.0045/S355JR, 1.1231/C67S	A570 GR 36, 1010, 1015, 1020, 1025, 1030, 1035, 1040, 1045, 1050, 1055, 1060, 1070
TU 14-1-584, TU 14-1-1529	20	1.1151/C22E	1020
TU 14-1-3000	20, 35, 45	1.1151/C22E, 1.1181/C35E, 1.1191/C45E	1020, 1035, 1045
TU 14-1-1076, GOST 1050	30	1.1178/C30E	1030
TU 14-1-4179	20ЮЧ		

HOT ROLLED PLATES

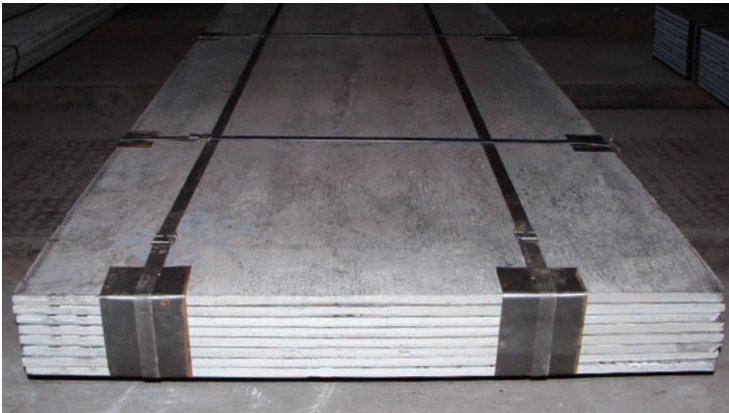
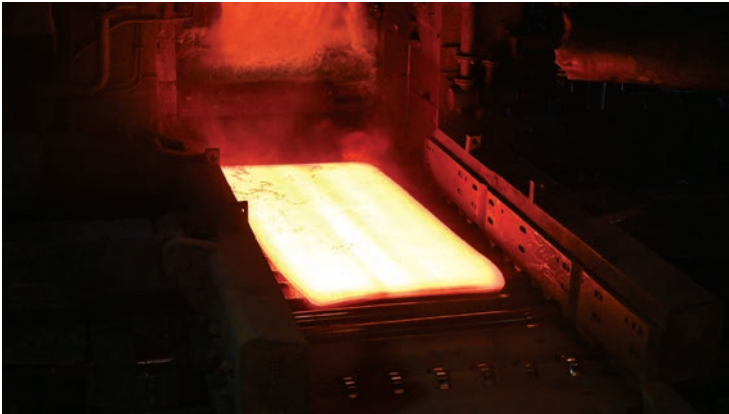


RANGE OF PRODUCTS	SHAPE			TECHNICAL REQUIREMENTS FORCHEMICAL COMPOSITION AND RANGE OF PRODUCTS
	THICKNESS, MM	WIDTH, MM	LENGTH, MM	
Stainless steel	4...30	1000...1500	3000...6000	GOST 7350, GOST 5632 for the plates of over 50 mm as agreed, GOST 5632
	30...40	1000...1300	2000...4000	
	40...50	600...1100	1500...3000	
	50...100	600...1100	1500...3000	
Corrosion- and heat-resistant special purpose steel and alloys	5...20	1000...1500	3000...6000	TU 14-1-625, GOST 5632
	4...30	1000...1500	3000...6000	As agreed, GOST 5632
	30...40	1000...1300	2000...4000	
	4...30	1000...1500	3000...6000	GOST 7350, GOST 5632
	30...40	1000...1300	2000...4000	
	40...50	600...1100	1500...3000	
	50...100	600...1100	1500...3000	As agreed, GOST 5632
	5...60	600...1500	1500...6000	As agreed
Steels and alloys with the special properties	4...30	1000...1500	3000...6000	As agreed
	30...40	1000...1300	2000...4000	
	40...100	600...1100	1500...3000	

Thickness tolerance is +3,0/–1,0 for the plates of 40 mm and over in thickness

STEEL GRADES	EQUIVALENT FOREIGN STANDARDS	
	European standards (DIN, EN)	US standards (ASTM/AISI)
08X13, 12X17, 08X17T, 14X17H2, 20X13		
XH32T	1.4000/X6Cr13, 1.4021/X20Cr13,1.4016/X6Cr17, 1.4510/X3CrTi17, 1.4057/X17CrNi16-2, 1.4306/X2CrNi19-11, 1.4541/X6CrNiTi18-10, 1.4301/X5CrNi18-10, 1.4307/X2CrNi18-9, 1.4310/X10CrNi18-8, 1.4435/X2CrNiMo18-14-3, 1.4571/X6CrNiMoTi17-12-2, 1.4878/X8CrNiTi18-10	310, 316L, 410S, 410, 420, 321, 316Ti, 304, 304L, 430, 439, 329
XH38BT		
XH78T		
XH60BT		
15X25T, 08X21H6M2T, 09X16H4Б, 03X18H11, 03X17H14M3, 04X18H10, 08X18H10, 08X18H10T, 12X21H5T, 20X23H13, 20X23H18, 10X17H13M2T, 10X14Г14H4T, 10X17H13M3T, 08X17H13M2T, 12X18H9, 12X18H9T, 12X18H10T,12X18H12T, 17X18H9, 07X16H6, 08X22H6T, 06XH28МДТ		
12X18H10T-Ш, 09X16H4Б-Ш, 12X21H5T-Ш, 11X11H2B2MΦ-Ш		
45Г17Ю3		

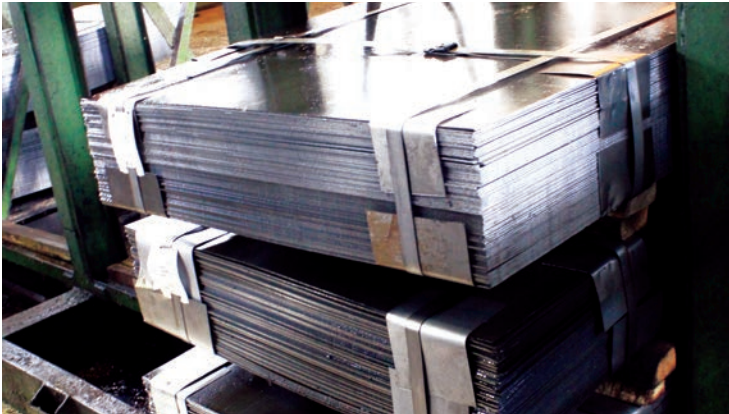
HOT ROLLED PLATES



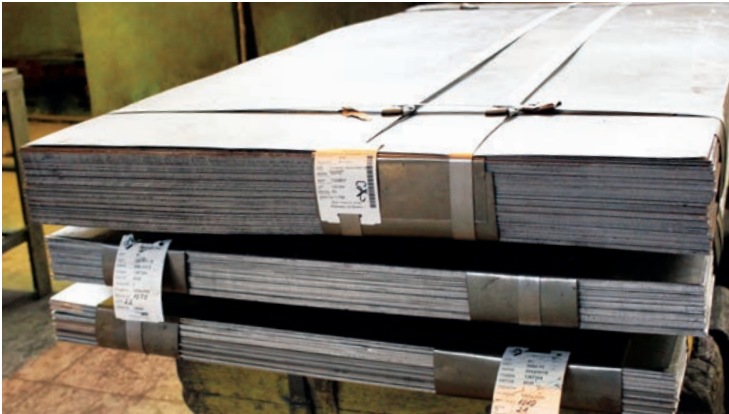
RANGE OF PRODUCTS	SHAPE		
	THICKNESS, MM	WIDTH, MM	LENGTH, MM
Structural alloy and nickel-containing steel	4...30	1000...1500	3000...6000
Tool steel	30...40	1000...1300	2000...5000
	40...100	600...1250	2000...4500
	4...30	1000...1500	3000...6000
	30...40	1000...1300	2000...5000
	4...30	1000...1500	3000...6000
	30...40	1000...1300	2000...5000
	40...100	600...1250	2000...4500
Structural and commercial quality carbon steel	4...30	1000...1500	3000...6000
	30...40	1000...1300	2000...5000
	40...100	600...1250	2000...4500
	4...30	1000...1500	3000...6000
	30...40	1000...1300	2000...5000
	40...100	600...1250	2000...4500
	6...7	1000...1500	3000...6000
	20...40	1000...1300	2000...5000

TECHNICAL REQUIREMENTS TO THE CHEMICAL COMPOSITION AND RANGE OF PRODUCTS	STEEL GRADES	EQUIVALENT FOREIGN STANDARDS	
		European standards (DIN, EN)	US standards (ASTM/AISI)
GOST 1577, GOST 4543	20X, 30X, 40X, 45X	1.7016/17Cr3, 1.7030/28Cr4, 1.7035/41Cr4, 1.7045/42Cr4	5120, 5130, 5140, 5145
GOST 1577, GOST 14959	65Г	1.1231/C67S	1566
GOST 11269, GOST 4543	30XГCA		
As agreed, TU 14-1-3370	07X3ГНМЮА		
TU 14-1-702	20X3МВФ (ЭИ 415)		
TU 14-1-1409, GOST 4543	12XH3A, 12X2H4A	1.5752/15NiCr13	3415
TU 14-1-518	12XH, 20XГНМ, 40XГНМ	1.6523/20NiCrMo2-2, 1.6510/39NiCrMo3	8620, 8640
As agreed, GOST 4543, TU 14-1-1236	45XH2МФА-Ш, 32X2HBMБP-Ш (КВК-32Ш)		
As agreed, GOST 4543	18XГ, 18XГТ, 25XГТ, 30XГТ	1.7131/16MnCr5	5115
GOST 7350, GOST 20072	15X5M		501
GOST 5520	12XM, 12X1MФ		
GOST 1577, GOST 4543	20X, 30X, 40X, 45X	1.7016/17Cr3, 1.7030/28Cr4, 1.7035/41Cr4, 1.7045/42Cr4	5120, 5130, 5140, 5145
GOST 11269, GOST 4543	30XГCA		
GOST 1577, GOST 4543	20X, 30X, 40X, 45X	1.7016/17Cr3, 1.7030/28Cr4, 1.7035/41Cr4, 1.7045/42Cr4	5120, 5130, 5140, 5145
As agreed, GOST 1435	У7, У7А, У8А, У10А	1.1620/C70W2, 1.1520/C70U, 1.1625/C80W2, 1.1645/C105W2	W1, W108, W110, W112
As agreed, GOST 5950	ХВГ, 6XC, 9XC, 6XB2C, 9XФМ, 9XФ		
GOST 1577, GOST 1050	10, 15, 20, 25, 30, 35, 40, 45, 50, 55, 60	1.1121/C10E, 1.1141/C15E, 1.1151/C22E, 1.1158/C25E, 1.1178/C30E, 1.1181/C35E, 1.1186/C40E, 1.1191/C45E, 1.1206/C50E, 1.1203/C55E, 1.1221/C60E	1010, 1015, 1020, 1025, 1030, 1035, 1040, 1045, 1050, 1055, 1060
GOST 14637, GOST 380	Cr3cn	1.0037/St 37-2	A570 GR 36
TU 14-1-2650	85-Ш		
GOST 5520	20K	1.1151/C22E	1020
As agreed, GOST 19281	09Г2С, 10ХСНД, 15ХСНД, 16ГС, 17ГС, 16Г2АФ		

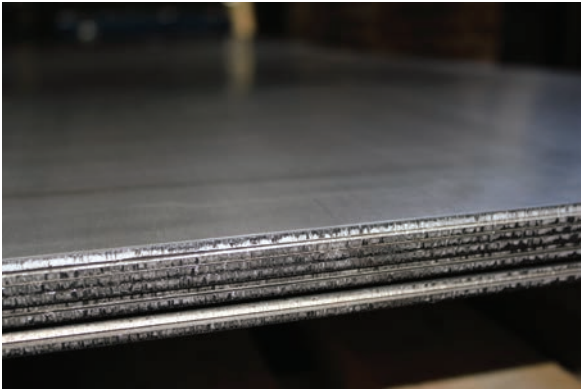
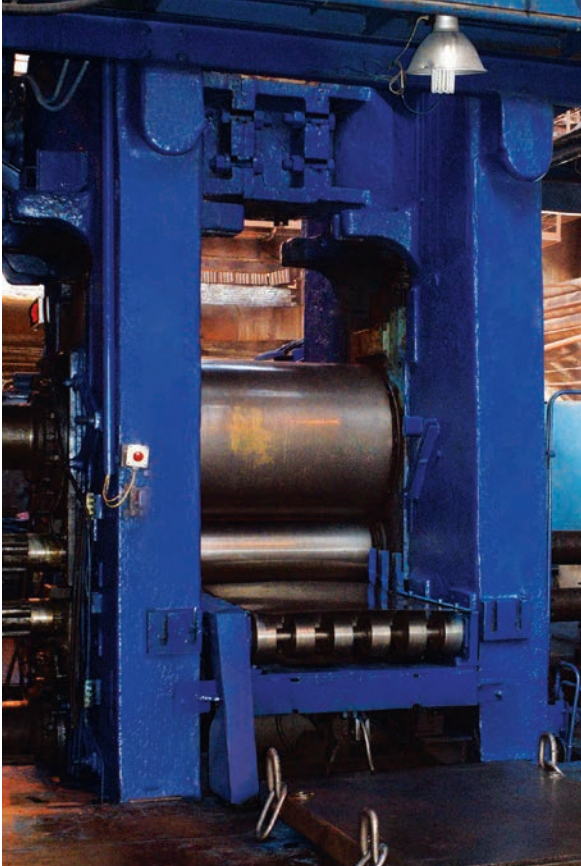
HOT ROLLED SHEETS



RANGE OF PRODUCTS	SHAPE		
	THICKNESS, MM	WIDTH, MM	LENGTH, MM
Stainless steel	2...3,9	800...1000	1600...2000
Corrosion- and heat-resistant special purpose steel and alloys	2...3,9	800...1000	1600...2000
	2...3,9	800...1000	1600...2000
Structural alloy and nickel-containing steel	2...3,9	800...1000	1600...2000
Tool steel	2...3,9	800...1000	1600...2000
Structural and commercial quality carbon steel	2...3,9	800...1000	1600...2000



TECHNICAL REQUIREMENTS TO THE CHEMICAL COMPOSITION AND RANGE OF PRODUCTS	STEEL GRADES	EQUIVALENT FOREIGN STANDARDS	
		European standards (DIN, EN)	US standards (ASTM/AISI)
GOST 5582, GOST 5632	08X13, 12X17, 08X17T, 20X13, 30X13, 40X13, 14X17H2		
As agreed, GOST 5632	XH32T, XH38BT, XH78T, XH60BT		1.4000/X6Cr13, 1.4021/X20Cr13, 1.4028/X30Cr13, 1.4016/X6Cr17, 1.4510/X3CrTi17, 1.4057/X17CrNi16-2, 1.4306/X2CrNi19-11, 1.4541/X6CrNiTi18-10, 1.4301/X5CrNi18-10, 1.4307/X2CrNi18-9, 1.4310/X10CrNi18-8, 1.4031/X39Cr13, 1.4510/X3CrTi17, 1.4435/X2CrNiMo18-14-3, 1.4571/X6CrNiMoTi17-12-2
GOST 5582, GOST 5632	15X25T, 08X21H6M2T, 09X16H4Б, 03X18H11, 03X17H14M3, 08X18H10, 08X18H10T, 12X21H5T, 20X23H13, 20X23H18, 10X17H13M2T, 10X14Г14H4T, 10X17H13M3T, 12X18H9, 12X18H10T, 17X18H9, 07X16H6, 08X22H6T, 06XH28МДТ		410S, 410, 420, 321, 316Ti, 304, 304L, 430, 439, 329
TU 14-1-4118, GOST 4543	20X, 30X, 35X, 40X	1.7016/17Cr3, 1.7030/28Cr4, 1.7033/34Cr4, 1.7035/41Cr4	5120, 5130, 5135, 5140
TU 14-1-4118, GOST 14959	65Г	1.1231/C67S	1566
GOST 11268	25ХГСА, 30ХГСА		
As agreed by the parties, GOST 4543	12XH, 20XГНМ, 40XГНМ	1.6523/20NiCrMo2-2, 1.6510/39NiCrMo3	8620, 8640
	12XH3A, 12X2H4A	1.5752/15NiCr13	3415
As agreed by the parties, TU 14-1-702	20X3МВФ (3И 415)		
As agreed by the parties, TU 14-1-3370	07X3ГНМЮА		
As agreed by the parties, GOST 5520	12XM		
As agreed by the parties, TU 14-1-687, TU 14-1-1409, GOST 11268	12X1MФ, 12X2HВФА, 50ХГФА, 60C2A, 60C2, 65C2BA	1.5027/60Si7, 1.8159/51CrV4	6150, 9260
TU 14-1-776, GOST 1435	У7, У7А, У8А, У10А	1.1620/C70W2, 1.1520/C70U, 1.1625/C80W2, 1.1645/C105W2	W1, W108, W110
As agreed by the parties, GOST 5950	ХВГ, 6ХС,5ХНМ	1.2419/105WCr6, 1.2713/55NiCrMoV6	
As agreed by the parties, TU 14-1-795	9ХФМ, 9ХФ		
GOST 16523 (group IV), GOST 380	Cr3cn	1.0037/St 37-2	A570 GR 36
GOST 16523 (group IV), GOST 1050	10, 15, 20, 25, 30, 35, 40, 45, 50	1.1121/C10E, 1.1141/C15E, 1.1151/C22E, 1.1158/C25E, 1.1178/C30E, 1.1181/C35E, 1.1186/C40E, 1.1191/C45E, 1.1206/C50E,	1010, 1015, 1020, 1025, 1030, 1035, 1040, 1045, 1050
As agreed by the parties, GOST 5520	20K	1.1151/C22E	1020
As agreed by the parties, GOST 19281	09Г2С, 10ХСНД, 15ХСНД, 16ГС, 17ГС, 16Г2АФ	1.0045/S355JR, 1.0570/St52-3	



RANGE OF PRODUCTS	SHAPE		
	THICKNESS, MM	WIDTH, MM	LENGTH, MM
Corrosion- and heat-resistant special purpose steel and alloys	0,8-3,5	700-1000	1000-2000
Structural alloy steel	0,8-3,5	700-1000	1000-2000

TECHNICAL REQUIREMENTS FOR CHEMICAL COMPOSITION AND RANGE OF PRODUCTS	STEEL GRADES	EQUIVALENT FOREIGN STANDARDS	
		European standards (DIN, EN)	US standards (ASTM/AISI)
GOST 19904	08X18H10, 08X18H10T, 12X18H9, 12X18H9T, 10X17H13M2T(ЭИ448), 12X18H10T, 12X18H12T, 07X16H6(ЭП288), ХН78Т(ЭИ435), ХН35ВТ(ЭИ612), ХН38ВТ(ЭИ703), ХН60ВТ(ЭИ868), ХН45МВТЮБР-ИД (ЭП 718-ИД), ХН50ВМТЮБ-ВИ (ЭП648-ВИ), ХН62ВМЮТ-ВД (ЭП708-ВД)	1.4541/X6CrNiTi18-10, 1.4301/X5CrNi18-10, 1.4307/X2CrNi18-9, 1.4310/X10CrNi18-8	4108, 410, 420, 321, 316Ti, 304, 304L, 430,439,329
GOST 19904	12X2НВФА (ЭИ 712), 32X2НВМБР-Ш (КВК-32Ш) (AS AGREED BY THE PARTIES)		

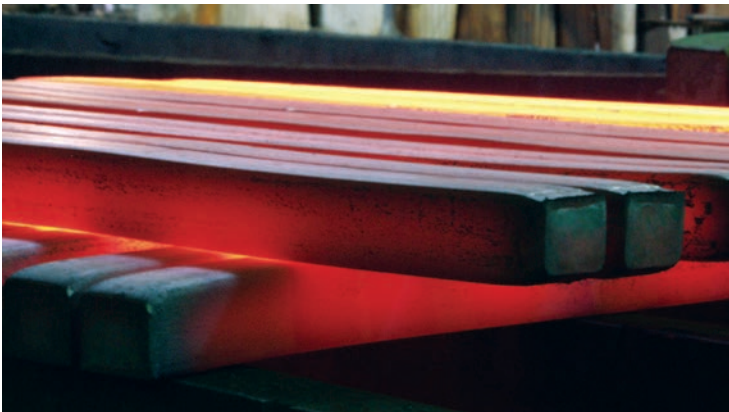
HOT ROLLED SQUARE BARS
(BLOOMS + SQUARE BILLETS)



RANGE OF PRODUCTS	SHAPE		TECHNICAL REQUIREMENTS FOR CHEMICAL COMPOSITION AND RANGE OF PRODUCTS
	DIMENSIONS, MM	LENGTH, MM	
Stainless steel	200...360x200...360	2000...6000	TU 14-1-4492-19 (1ГП and 2ГП groups), chemical composition acc. to GOST 5632-2014
Corrosion- and heat-resistant special purpose steel	200...360x200...360	2000...6000	As agreed by the parties
	200...360x200...360	200D...6000	TU 14-1-4492-19 (1ГП and 2ГП groups), chemical composition acc. to GOST 5632-2014
Structural bearing steel	200...360x200...360	2000...6000	TU 14-1-4492-19 (1ГП and 2ГП groups), chemical composition acc. to GOST 801-78
Structural alloy and nickel-containing steel	200...360 x 200...360	2000...6000	TU 14-1-4492-19 (1ГП and 2ГП groups), chemical composition acc. to GOST 4543-2016
Square billets	100,120,125,130,140,160	2000 ...4000	TU 14-1-4492-19 (1ГП and 2ГП groups), chemical composition as agreed by the parties

STEEL GRADES	EQUIVALENT FOREIGN STANDARDS	
	European standards (DIN, EN)	US standards (ASTM/AISI)
08X13, 12X13, 20X13, 30X13, 40X13, 08X14MΦ, 08X14MΦ-Ш, 40X9C2, 40X10C2M, 14X17H2, 15X11MΦ-Ш, 13X11H2B2MΦ-Ш (ЭИ 961-Ш)	1.4000/X6Cr13, 1.4006/X12Cr13, 1.4021/X20Cr13, 1.4028/X30Cr13, 1.4718/X45CrSi9-3, 1.4031/X39Cr13, 1.4034/X46Cr13, 1.4541/X6CrNiTi18-10, 1.4057/X17CrNi16-2, 1.4731/X40CrSiMo10-2, 1.4571/X6CrNiMoTi17-12-2, 1.4878/X8CrNiTi18-10, 1.4301/X5CrNi18-10, 1.4307/X2CrNi18-9, 1.4310/X10CrNi18-8	420, 410, 431, 321, 316Ti, 304, 304L, 301, 316
06X14H6Д2МБТ-Ш (ЭП 817-Ш), 07X12HM6Φ-Ш (ЭП 609-Ш), 15X12H2MBΦАБ-Ш (ЭП 517-Ш)		
08X18H10T, 08X17H13M2T, 08X17H6T, 10X17H13M2T, 10X17H13M3T, 12X18H10T, 08X22H6T, 07X16H6-Ш		
ШX15-B, ШX15CГ-B	1.2067/102Cr6, 1.3505/100Cr6, 1.3520/100CrMnSi6-4	52100, 2 (A485)
15Г, 20Г, 25Г, 30Г, 35Г, 40Г, 45Г, 50Г, 15ХА, 20Х, 30Х, 35Х, 40Х, 45Х, 50Х, 25ХГМ, 38ХГМ, 18ХГ, 18ХГТ, 25ХГТ, 30ХГТ, 33ХС, 38ХС, 40ХС, 15ХМ, 20ХМ, 30ХМ, 35ХМ, 38ХМ, 40ХМΦА, 12ХН3А, 20ХН3А, 30ХН3А, 15ХГН2ТА, 12Х2Н4А, 20Х2Н4А, 20ХГНМ, 40ХГНМ, 40ХН2МА, 38Х2МЮА, 10Г2, 20ХГР, 30Х3МΦ, 30ХМА, 40ХΦА, 20ХН, 40ХН, 45ХН, 50ХН, 20ХНР, 12ХН2, 20ХГСА, 25ХГСА, 30ХГСА, 35ХГСА, 30ХГС, 30ХГСН2А, 20ХГНР, 20ХГНТР, 19ХГН, 20ХН2М, 38ХН3МА, 18Х2Н4МА, 38ХН3МΦА, 30ХН2МА, 38Х2Н2МА, 40Х2Н2МА, 30ХН2МΦА, 25ХГНМТ	1.6510/39NiCrMo3, 1.7160/16MnCrB5, 1.7147/20MnCr5, 1.7243/18CrMo4, 1.6571/20NiCrMoS6-4, 1.6587/18CrNiMo7-6, 1.6580/30CrNiMo8, 1.1148/C16E, 1.1133/20Mn5, 1.1170/28Mn6, 1.1157/40Mn4, 1.0912/46Mn7, 1.7016/17Cr3, 1.7030/28Cr4, 1.7033/34Cr4, 1.7035/41Cr4, 1.7045/42Cr4, 1.7131/16MnCr5, 1.7337/16CrMo4-4, 1.7255/23CrMo5, 1.7258/24CrMo5, 1.7218/25CrMo4, 1.7216/30CrMo4, 1.7220/34CrMo4, 1.7223/41CrMo4, 1.1109/12Mn5, 1.6563/41NiCrMo7-3-2, 1.7707/30CrMoV9, 1.8519/31CrMoV9, 1.7225/42CrMo4, 1.6582/34CrNiMo6, 1.6565/40NiCrMo6, 1.8509/41CrAlMo7-10, 1.6523/20NiCrMo2-2, 1.5752/15NiCr13, 1.5711/40NiCr6, 1.6657/14NiCrMo13-4	1039, 1046, 1551,1022, 1525, 1037, 1513, 4137, 5135, 5145, 8640, 1016, 1330, 5115, 5120, 5140, 5130, 4130, 4140, 4142, 4320, 4330, 4340, E3310, 8617, 8620, 8740, 1026, 5150, 6135, 3135

HOT ROLLED SQUARE BARS
(BLOOMS + SQUARE BILLETS)



RANGE OF PRODUCTS	SHAPE	
	DIMENSIONS, MM	LENGTH, MM
Structural alloy and nickel-containing steel	200...360 x 200...360	2000...6000
	200...360 x 200...360	2000...6000
	200...360 x 200...360	2000...6000
	200...360 x 200...360	2000...6000
Structural and commercial quality carbon steel	200...360 x 200...360	2000...6000
	200...360 x 200...360	2000...6000
	200...360 x 200...360	2000...6000
	200...360 x 200...360	2000...6000
Tool steel	200...360x200...360	2000...6000
	200...360x200...360	2000...6000

TECHNICAL REQUIREMENTS FOR CHEMICAL COMPOSITION AND RANGE OF PRODUCTS	STEEL GRADES	EQUIVALENT FOREIGN STANDARDS	
		European standards (DIN, EN)	US standards (ASTM/AISI)
TU 14-1-4492-19 (1ГП and 2ГП groups), chemical composition acc. to GOST 20072-74	12X1MΦ, 25X1MΦ, 20X3MБΦ, 15X5M, 12MX	1.7366/X16CrMo5-1	
TU 14-1-4492-19, group 1ГП, 2ГП, GOST 14959-2016	50XГΦА, 60Г, 65Г, 70Г, 55C2, 55C2A, 60C2,60C2A, 50XΦА, 60C2XΦА	1.8159/51CrV4, 1.1740/C60W, 1.5026/56Si7, 1.1231/C67S	9255, 9260, 6150 1561, 1566, 1572
TU 14-1-4492-19 (1ГП and 2ГП groups), chemical composition acc. to GOST 4543-16	45XH2MΦА-Ш, 40XH2MA-Ш, 38X2MЮА-Ш, 30XMA-Ш, 40XΦА-Ш, 40XC-Ш, 20X2H4A-Ш, 38XH3MA-Ш, 38XH3MΦА-Ш, 25XГCA-Ш, 30XГCA-Ш, 12XH3A-Ш, 20XH3A-Ш, 18X2H4BA-Ш		
As agreed by the parties	14X2H3MA, 07X3ГHМЮА, 60XΦА-Ш, 16X3HБΦMБ-Ш (ДИ39-Ш)		
TU 14-1-4492-19 (1ГП and 2ГП groups), chemical composition acc. to GOST 380-2005	Ст3сп, Ст5сп	1.0037/St 37-2, 1.0050/St 50-2	A570 GR 36, A570 GR 50
TU 14-1-4492-19 (1ГП and 2ГП groups), chemical composition acc. to GOST 1050-2013	10, 15, 20, 25, 30, 35, 40, 45, 50, 55, 60	1.1121/C10E, 1.1141/C15E, 1.1151/C22E, 1.1158/C25E, 1.1178/C30E, 1.1181/C35E, 1.1186/C40E, 1.1191/C45E, 1.1206/C50E, 1.1203/C55E, 1.1221/C60E	1010, 1015, 1020, 1025 1030, 1035, 1040, 1045, 1050, 1055, 1060
TU 14-1-4492-19 (1ГП and 2ГП groups), chemical composition acc. to GOST 14959-2016	65, 70, 75, 80, 85	1.1231/C67S, 1.1248/C75S, 1.1269/C85S	1065 ,1070, 1075, 1080, 1084
TU 14-1-4492-19 (1ГП and 2ГП groups), chemical composition acc. to GOST 19281-2014	09Г2C, 10XCHД, 15XCHД, 12ГC, 17ГC		
TU 14-1-4492-19 (1ГП and 2ГП groups), chemical composition acc. to GOST 1435-99	У7, У7А, У8, У8А, У9, У9А, У10, У10А, У12, У12А	1.1620/C70W2, 1.1520/C70U, 1.1625/C80W2, 1.1525/C80U, 1.1535/C90U, 1.1545/C105U, 1.1645/C105W2, 1.1563/C125U, 1.1555/C120U	W1, W108, W110, W112
TU 14-1-4492-19 (1ГП and 2ГП groups), chemical composition acc. to GOST 5950-2000	4X5MΦ1C, ХБГ, 4X5MΦC, 4XMΦC, 3X3M3Φ, 5XHM, 6XB2C, 9XΦM, 9XΦ	1.2365/X32CrMoV33, 1.2344/X40CrMoV5-1, 1.2713/55NiCrMoV6, 1.2419/105WCr6, 1.2343/ X38CrMoV5-1, 1.2714/55NiCrMoV7	H13, L6, D3,02,01, H11, L2

DAVY AUTOMATED FORGING PLANT WITH THE PRESS OF 13 000 TF PRESS FORCE

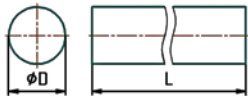
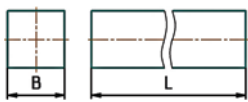
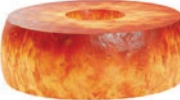
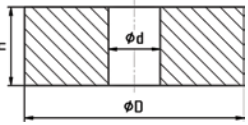
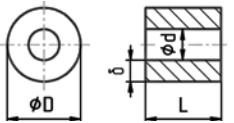
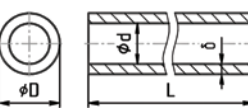
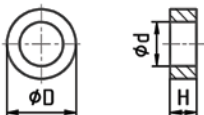


EQUIPMENT COMPOSITION:

- DAVY automated forging plant with the press of 8000 tf forging force and 13 000 tf upset force
- Forging manipulator of 200 t lifting capacity
- Forging crane of 400/100 t lifting capacity
- Three heating bogie-hearth furnaces with the dimensions of 4 × 9 m and 165 t lifting capacity
- Two heat-treatment bogie-hearth furnaces with the dimensions of 4 × 16 m and 340 t lifting capacity to carry out preliminary heat treatment of forgings made of various steel grades: annealing, normalization with tempering, isothermal annealing
- Final heat-treatment of forgings
- Automated forging plant makes possible to obtain forgings from ingots of up to 140 t in weight

RANGE OF STEEL GRADES (INCLUDING, BUT NOT LIMITED TO)

LOW ALLOY STEEL		BEARING STEEL	
09Г2С	16ГС	ШХ15СГ	ШХ15
15Г-65Г	S355J2G3	TOOL STEEL	
STRUCTURAL CARBON STEEL		У8 (А)-У10(А)	5ХНБ
10-70	Сk60N	9ХВ	5ХНМ
С45	20ЮЧ	9Х2	5ХН1М
Ск45		9Х2МФ	4Х5МФС
		6ХВ2С	ХВГ
STRUCTURAL ALLOY STEEL		NICKEL-CONTAINING ALLOY STEEL	
20-40Х	St52-3	12ХН2	12-25Х1МФ
20-38ХМА	14Х2ГМР	30ХН2М	08ГДНФ
15Х1М1Ф	38ХГМ	40ХНМА	20Х2Н4А
15Х2МФА	33ХС	40ХН2МА	18Х2Н4МА
15Х2НМ1ФА	40-60ХН	12ХН3А-30ХН3А	12Х2НВФА
15Х2НМ1ФА-А	20ХГНМ	34ХН3МА	38Х2Н2МА
15Х3НМФА	34ХН1М	35ХН3МФА	12Х2МФА (48ТС-2)
15Х3НМФА-А	20ХГСДЮЧ	35ХН3МФАР	15Х2МФА (48ТС-3)
50ХФА	20Х2МА	38ХН3М	25Х2МФА (48ТС-1)
20-40ХГСА	12Х2НМФА	38ХН3МА	АК29ПК
15Х5М	12Х2ГМФБРЧА	38ХН3МФА	
42CrMo4	07Х3ГНМЮА		
21CrM10	21CrMo10V4		
STAINLESS STEEL AND ALLOYS			
20-40Х13	08-12Х18Н10Т	08Х18Н9Т	12Х18Н9
08-12Х18Н12Т	07Х16Н4Б (-Ш)	10Х17Н13М2Т	10Х18Н12М3Т
15Х12Н2МВБФ-Ш (ЭИ-961)	07Х12НМФБ (ЭП609-Ш)	13Х11Н2В2МФ-Ш (ЭИ961-Ш)	06Х14Н6Д2МБТ-Ш (ЭП817-Ш)
05ХН32Т (ЭП670)	12ХН35ВТ(ЭИ612)	12ХН38ВТ(ЭИ703)	

TYPE OF FORGING	FORGING	DRAWING	PRESS OF 3150 TF	FORGING WEIGHT, T	PRESS OF 13 000 TF	FORGING WEIGHT, T
SMOOTH, ROUND SECTION			D = 230-700 mm L ≤ 6300 mm	1,0-17,0	D = 300-1100 mm L ≤ 14000 mm	up to 92
			D = 400-700 mm L ≤ 13500 mm	up to 17,0		
SMOOTH, RECTANGULAR SECTION			B = 210-500 mm L ≤ 3500 mm	up to 17,0	B = 350-1 100 mm L ≤ 5000 mm	up to 92
STEPPED SHAFTS			$D_{max} \leq 700$ mm L ≤ 6300 mm	up to 17,0	$D_{max} \leq 1600$ mm L ≤ 14000 mm	up to 85
DISCS WITH AND WITHOUT A HOLE			D ≤ 1500 mm H ≥ 200 mm	up to 3,2	D ≤ 3500 mm H = 220-800 mm	up to 85
SLEEVES			D ≤ 1200 mm δ ≤ 200 mm L ≤ 1400 mm	up to 7,0	B ≤ 2800 mm δ ≤ 500 mm L ≤ 3000 mm	up to 85
CYLINDERS WITH A HOLE			D = 400-600 mm δ ≤ 200 mm L ≤ 4500 mm	up to 5,5	D = 500-1000 mm δ = 100 - 500 mm L ≤ 4500 mm	up to 85
PLATES WITH AND WITHOUT A HOLE			H ≥ 140 mm B ≤ 1000 mm L ≤ 2000 mm	up to 2,2	H ≥ 220 mm B ≤ 2200-3500 mm L ≤ 6000 mm	up to 85
RINGS			D ≤ 1800 mm δ ≤ 300 mm	up to 5,0	D ≤ 3750 mm δ = 300 - 500 mm H ≤ 2200 mm	up to 80

HAMMER FORGINGS:

TYPE, WEIGHT AND OVERALL DIMENSIONS (FORGING HAMMERS WITH THE FALLING PART OF 3 AND 5 TONS)

HAMMER		SMOOTH SHAFTS, BARS	STEPPED SHAFTS	PLATES	CYLINDERS, BUSHES	DISCS, DISCS WITH A HOLE, CUBES	FLANGES WITH AND WITHOUT A HOLE	DISCS WITHOUT ROLLING
Falling part weight = 3150 kg	Weight, kg	Carbon steel	20,1-1200	20,1-800	20,1-120		15,1-120	20,1-120
		Stainless steel	15,1-800	15,1-600	15,1-100		10,1-100	15,1-100
	Dimensions, mm	Dmax-270 Dmin-60 Bmax-245 Bmin- 60 Lmax-4900	Dmax-270 dmin-60 Bmax-245 bmin-60 Lmax-4900	Bmax-400 Hmin-20 Lmax-4000	Dmax-250 dmax-150 dmin-90 Lmax-900	Dmax-550 dmax-180 dmin-60 Hmin-40	Dmax-500 dmax-150; dmin-60	Dmax-550 Hmin-40 dmax-180 dmin-60
Falling part weight = 5000 kg	Weight, kg	Carbon steel	x	x	120,1-350		100,1-300	120,1-350
		Stainless steel	x	x	100,1-300		80,1-270	100,1-300
	Dimensions, mm	x	x	x	Dmax-350 dmax-210 dmin-90 Lmax-700	Dmax-700 dmax-220 dmin-60 Hmin-50	x	x



TYPE OF FORGING	FORGING	DRAWING
SMOOTH, ROUND SECTION		
SMOOTH, RECTANGULAR SECTION		
STEPPED SHAFTS		
DISCS WITH AND WITHOUT A HOLE		
SLEEVES		
CYLINDERS WITH A HOLE		
PLATES WITH AND WITHOUT A HOLE		
RINGS		

PRESS OF 630 TF	PRESS OF 2000 TF	WEIGHT, T	RING-ROLLING MILL RAW 160/200 3000/630	WEIGHT, T
$D = 70 - 400$ $L = 500 - 4000$	$D = 250 - 720$ $L = 1000 - 5500$	1,0-6,0	-	-
$B = 70 - 350$ $L = 500 - 4000$	$B = 200 - 640$ $L = 1000 - 5000$	1,0-6,0	-	-
$D = 70 - 400$ $L = 500 - 4000$	$D = 230 - 720$ $L = 1000 - 5500$	1,0-6,0	-	-
$D \leq 1000$ $H \geq 70$ $d = 70 - 220$	$D \leq 1500$ $H \geq 105$ $d = 100 - 300$	0,4-5,5	$D \leq 1800$ $H = 70-100$	0,1-2,5 (1,5 stainless steel)
$D \leq 1000$ $L \geq 70$ $d = 70 - 220$	$D \leq 1500$ $L \geq 105$ $d = 100 - 300$	0,4-5,5	-	-
$D = 220 - 450$ $d = 110 - 210$ $L = 400 - 800$	$D = 360 - 900$ $d = 160 - 550$ $L = 700 - 1700$	3,0-4,5	-	-
$H = 70 - 500$ $B = 70 - 500$ $L = 500 - 4000$	$H = 105 - 600$ $B = 200 - 950$ $L = 1000 - 5000$	1,0-5,5	-	-
-	-	-	$D = 350 - 3000$ $d = 250 - 2900$ $H = 65 - 600$	0,04-5,0 (2,5 stainless steel)



Rolled products are packed and marked in accordance with the requirements of standards and specifications as well as orders and contracts.

DEPENDING ON THE TYPE OF ROLLED PRODUCTS THE SHAPE OF BUNDLE OR PACKAGE MAY BE AS:

- round;
- triangle;
- rectangle.

EACH BUNDLE OR PACKAGE IS SECURED WITH:

- steel strip (for sheets and plates);
- wire of 5,5–7 mm in diameter (for bars);
- two-sided strapping with corrosion-resistant packing band using two synthetic ropes (for ground rolled products).

PRESERVATION:

liquid preservation composition based on industrial oil with addition of inhibitors.

PACKING:

wrapping with water-repellent paper or polyethylene film;
each sheet or plate is laid using package liners.

- with wire strapping every 2-3 metres;
- with laying of polyethylene film under strapping for stainless steel products.

Two labels with the following information are attached to each bundle or package of bars, sheets and plates intended for export:

RED OCTOBER	Krasny oktyabr
RUSSIA	Russia
C №	contract number
COUNTRY	country of destination
SIZE	dimensions
GRADE	steel grade
HEAT	heat number
LOT	lot (specification) number
PIECES	number
WEIGHT/MT	weight in metric tons (kilograms).

By the customer’s request the rolled products may be manufactured according to the requirements other than the applicable standards and specifications or in addition to them as follows:

- restricted limits for carbon and alloying elements;
- setting limits for hardness, mechanical properties, non-metallic inclusions and other characteristics not specified in the standards and specifications;
- pickling of sheets and plates;
- ultrasonic testing of internal defects for the turned round bars as well as sheets and plates clean from scale
- together with the examination of properties according to the procedures of international standards:

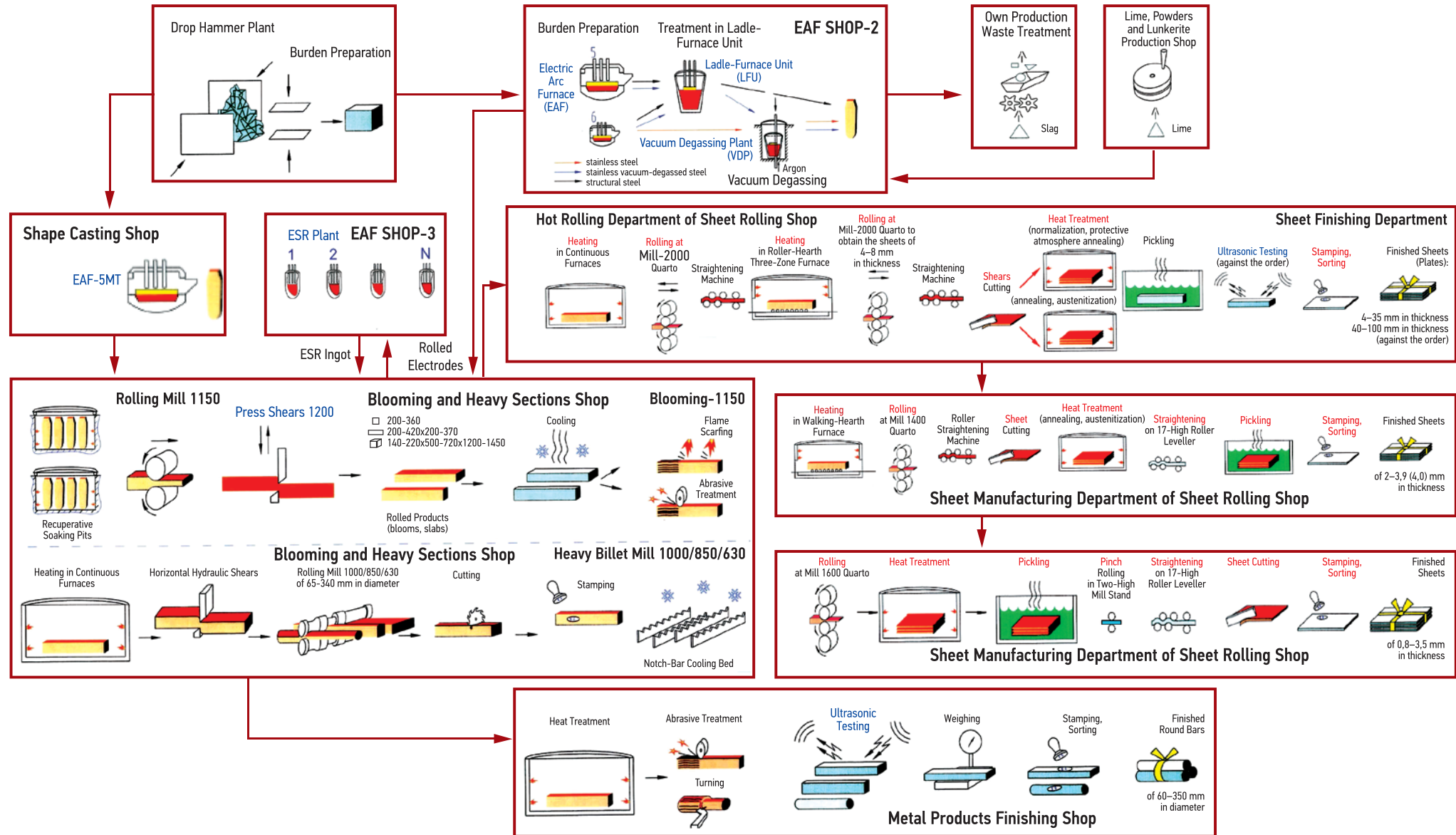
grain size	ASTME112;
non-metallic inclusions	ASTM E45 (method A);
macrostructure	ASTM E381;
ultrasonic testing of internal defects and etc..	SEP 1921

• Special requirements are drawn up by technical agreements or specifications agreed on the basis of technical protocol when concluding the contract.

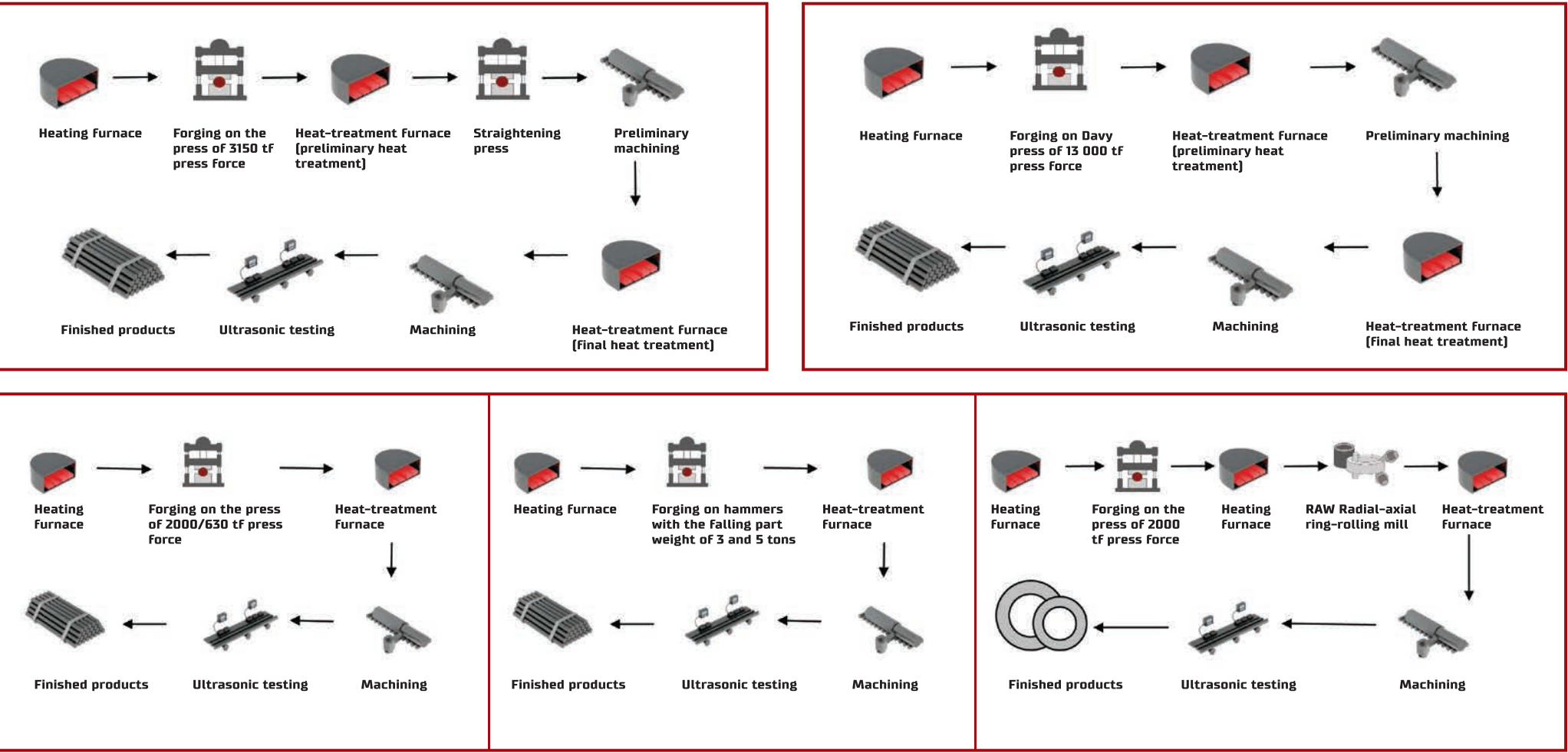
- As agreed with the customer the rounds of 70–340 mm in diameter may be supplied after grinding up to the surface roughness $Ra \leq 6,3 \mu m$.

• By the customer’s request the rolled products may be supplied in heat treated condition (after tempering, annealing, normalization, quenching + tempering).

FLOW SHEET OF MANUFACTURING OF METAL PRODUCTS



FLOW SHEET OF MANUFACTURING OF FORGINGS



«Krasny oktyabr Corporation» JSC is able to supply a need for the steel according to forging projects.

Krasny oktyabr Corporation, JSC

Russian Federation

400007, Volgograd, Lenina Av., 110

Phone: +7 (8442) 74-87-77

+7 800-301-3335 (Sales Directorate)

E-mail: sales@vmzko.ru



www.vmzko.ru @red_october_volgograd



@redoctober_volgograd



Изготовлено в ООО «ВОЛГИЗДАТ»

тел. (8442) 500-540