



Long products catalogue

 **METINVEST**

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Long products production

Azovstal I&SW



ANNUAL CAPACITY, T

1 420,000	RAIL AND STRUCTURAL MILL 1000/800
950,000	HEAVY SECTION MILL 800/650
150,000	BALL ROLLING MILL 1040, 620

RAILS
BEAMS
CHANNELS
ANGLES

SPECIAL PROFILES
GRINDING BALLS
RAIL FASTENERS

PRODUCT RANGE

Yenakiiv I&SW

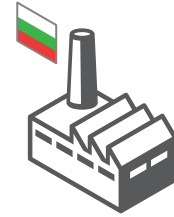


900,000	MILL 150
160,000	MILL 550
720,000	MILL 390

SQUARE BILLET
REBARS
WIRE ROD
BULB BAR

CHANNELS
BEAMS
ANGLES
RAILS
SPECIAL PROFILES

Promet Steel



500,000	MILL 300
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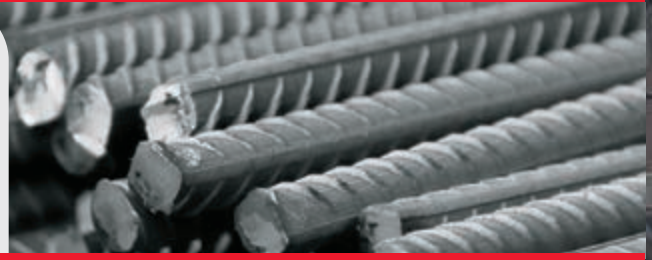
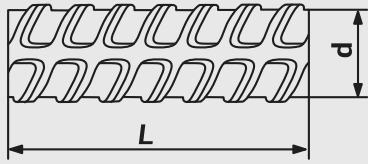
ANGLES
BEAMS
REBARS
ROUND BARS

SQUARE BARS
FLAT BARS
CHANNELS

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Reinforcing steel bar



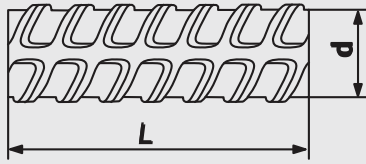
MILL	DIAMETER, MM	LENGTH, MM	SHIPPED IN	STANDARD OR TECHNICAL CONDITION	CLASS	STEEL GRADE	WEIGHT, KG/M
Reinforcing bar for construction							
Makiivka Branch of Enakiivne I&SW	8		coils	DSTU3760	A240S	St3ps/sp	0.395
	10						0.617
	12*						0.888
	8	6,000 - 12,000	bundles	DSTU 3760	A240C, A400S, A500S, A800	St3ps/sp, St4ps/sp, 08G2S, 25G2S	0.395
	10						0.617
	12						0.888
	14			GOST P 52544	A500S	St3ps/sp, St4ps/sp	1.210
	16						1.580
	18						2.000
	20						2.470
	22			STO ASHM 7-93	A400S, A500S	St3ps/sp, St4ps/sp	2.980
	25						3.850
	28			STB 1704	S400, S500	St3ps/sp, St4ps/sp	4.830
	32						6.310
	9,5			DIN 488*	BSt420S, BSt500S, B500A, B500B	St3ps/sp, St4ps/sp	0.560
	12,7						0.994
	15,9						1.552
	19,1			GOST 5781	AIII (A400)	25G2S, 35GS	2.235
	22,2						3.042
	25,4			ASTM A615/A615M	class 60 [420], class 75 [520]	St3ps/sp, St4ps/sp	3.973
28,7	5.060						
32,3	6.404						
40*	ISO 6935*	B500BWR	B500BWR	9.860			
Promet Steel	8	6,000-12,000 6,000-18,000	bundles	BDS 4758-2007	B235, B420B, B420C	St3sp/St4sp	0.395
	10			DIN 488	B500B	St3sp/St4sp	0.617
	12			BDS 9252	B500B / B500C	St3sp/St4sp	0.888
	14			BS 4449/97	Gr 460B	St3sp/St4sp	1.21
	16			BS 4449/2005	B500B	St3sp/St4sp	1.58
	18					2.00	
	20			ASTM A615/A615M	B500C	St3sp/St4sp	2.47
	22					2.98	
	25			ELOT 1421-3:2005	A240C/A500C	St3sp/St4sp	3.85
	28					4.83	
	32			DSTU 3760**	PC 52	St3sp/St4sp	6.31
	36			SR 438/1***	Gr280 / Gr420	St4sp/St5sp/35GS	7.9
	40				Gr420 / Gr60		9.086

* Production in the 390 Mill is technically possible.

** Material is produced according to DIN 488 and distributed according to DIN 488 certificate of correspondence to DSTU 3760.

*** Only for rebar 32 mm.

Reinforcing steel bar

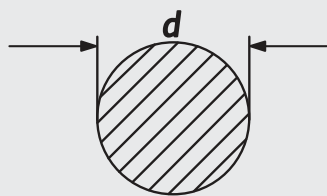


MILL	DIAMETER, MM	LENGTH, MM	SHIPPED IN	STANDARD OR TECHNICAL CONDITION	CLASS	STEEL GRADE	WEIGHT, KG/M					
Reinforcing bar for construction												
Promet Steel	9.5 12.7 15.9 19.1 22.2 25.4 28.7 32.3 35.8	6,000-12,000 6,000-18,000	bundles	BDS 4758-2007	B235, B420B, B420C	St3sp/St4sp	0.560 0.994 1.552 2.235 3.042 3.973 5.060 6.404 7.907					
				DIN 488 BDS 9252 BS 4449/97 BS 4449/2005	B500B B500B / B500C Gr 460B B500B	St3sp/St4sp St3sp/St4sp St3sp/St4sp St3sp/St4sp						
				ELOT 1421-3:2005	B500C	St3sp/St4sp						
				DSTU 3760**	A240C/A500C PC 52	St3sp/St4sp						
				SR 438/1***	Gr280 / Gr420 Gr420 / Gr60	St3sp/St4sp St3sp/St5sp/ps 35GS						
				ASTM A615/A615M								
				Thread bar for rock-bolting								
				Makiivka Branch of Enakiiv I&SW	20 22	6,000-12,000		bundles	TU U 27.3-23365425-661 (№ 20-32)	min 500 MPA	30GS	2.470 2.980

**Material is produced according to DIN 488 and distributed according to DIN 488 certificate of correspondence to DSTU 3760.

***Only for rebar 32 mm.

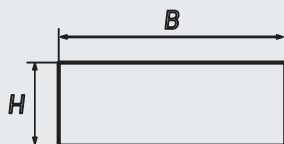
Wire rod



PRODUCT	MILL	DIAMETER, MM	SHIPPED IN	STANDARD OR TECHNICAL CONDITION	STEEL GRADE	WEIGHT, KG/M
Carbon steel wire rod (commercial quality)	Makiivka Branch of Enakiiv I&SW	5.5	coils (1,0 – 2,0 t)	DSTU 2770 (GOST 30136) DSTU 2651 (GOST 380) DSTU 4738 (GOST 2590)	St0, St1-2 kp/sp St3 kp/ps/sp	0.186
Carbon steel wire rod		6.0				0.222
Low-carbon wire rod for welding wire		6.5				0.260
High quality wire rod for welding wire		7.0		ASTM A510M	SAE1005–SAE1085	0.302
		7.5		EN 16120-2	C4D – C88D	0.347
Round bar		8.0		TU U 27.1-00190319-1280	Sv08, Sv08A	0.397
		8.5		TU U 27.1-00190319-1314*	Sv08A, Sv08G2S Sv08GS, Sv08GA Sv08G1NMA	0.466
9.0		0.499				
Non-alloy wire rod for drawing and/ or cold rolling		9.5		DSTU 4738 (GOST 2590) GOST 1050 GOST 14959	45-60 65-85	0.556
		10.0				0.616
		10.5				0.679
		11.0		DSTU 3684	10kp	0.746
		12.0				0.888
		12.5				0.963
	13.0			1.042		

* Production must be agreed with the mill.

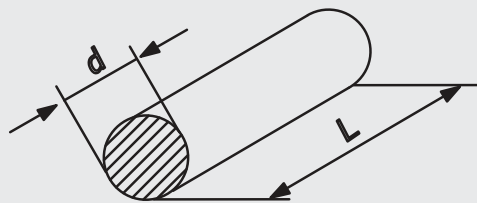
Flat bar



MILL	SIZES, MM			STANDARD OR TECHNICAL CONDITION	STEEL GRADE
	WIDTH, MM	THICKNESS, MM	LENGTH, MM		
Promet Steel	30	5/6/8/10/12/15/16/20	6000-12000	EN 10025 / EN 10058 GOST 535/ GOST 103	S235JR/ S275JR/ S355JR St3sp/pS
	35	5/6/8/10/12/15/16/20			
	40	5/6/8/10/12/15/20			
	45	5/6/8/10/12/15/20			
	50	5/6/8/10/12/15/20			
	60	6/8/10/12/15/20			
	65	6/8/10/12/15/20			
	70	6/8/10/12/15/20			
	75	6/8/10/12/15/20			
	80	6/8/10/12/15/20			
	32	4,8/ 6,4		ASTM A6 ASTM A36	ASTM A36
	38	4,8/ 6,4/ 8,0/ 9,5/ 12,7			
	44	4,8/ 6,4/ 8,0/ 9,5/ 12,7			
	51	4,8/ 6,4/ 8,0/ 9,5/ 12,7			
	1 ¼	3/16, 1/4			
1 ½	3/16, 1/4, 5/16, 3/8				
1 ¾	3/16, 1/4, 5/16, 3/8				
2	3/16, 1/4, 5/16, 3/8				
Makiivka Branch of Enakiive I&SW*	75	8,0/9,5	2000-6000	GOST 7419 GOST 14959	65-80, 60G-70G, 55S2, 55S2A, 60S2, 60S2A
	90	10.0/12.0			

*Production must be agreed with the mill.

Round bar

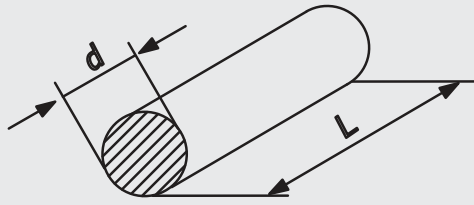


MILL	DIAMETER, MM	LENGTH, MM	SHIPPED IN	STANDARD OR TECHNICAL CONDITION	STEEL GRADE	WEIGHT, KG/M
Yenakieve I&SW	40	4,000 - 12,000	bundles up to 5 t	DSTU2651 (GOST 380) GOST 1050	St3sp, 45	9.865
Makiivka Branch of Enakiive I&SW*	12	2,000-12,000	bundles up to 5 t	DSTU2651 (GOST 380) DSTU 4484 (GOST 535) GOST 1050** GOST 14959**	St0, St3-St6 10-60 65-85, 60G-70G, 55S2, 55S2A, 60S2, 60S2A	0.888
	14					1.208
	16					1.578
	18					1.998
	20					2.466
	22					2.984
	23					3.262
	25					3.853
	28					4.834
	30					5.549
	32					6.313
	34					7.127
	35					7.553
	36					7.990
	38					8.903
	39					9.378
	40					9.865
42	10.876					
45	12.485					
48	14.205					
50	15.413					
52	16.671					
53	17.319					
56	19.335					
60	22.195					

* Full product range is indicated.

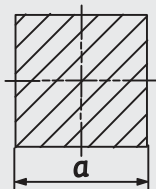
** Production must be agreed with the mill.

Round bar



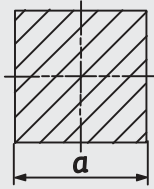
MILL	DIAMETER, MM	LENGTH, MM	SHIPPED IN	STANDARD OR TECHNICAL CONDITION	STEEL GRADE	WEIGHT, KG/M
Promet Steel	10	6,000-12,000	bundles up to 3 t	EN 10025-1,2	S235JR S275JR S355JR	0.617
	12					0.888
	14					1.21
	16					1.58
	18					2.00
	20					2.47
	22					2.98
	24					3.55
	25					3.85
	26					4.17
	27					4.49
	28					4.83
	30					5.55
	32					6.31
	34					7.13
	36					7.99
	40					9.86
	42					10.90
	43					11.4
45	12.5					
50	15.4					
52	16.7					
56	19.3					

Square bars



MILL	SIZES		STANDARD OR TECHNICAL CONDITION	STEEL GRADE	STANDARD FOR STEEL GRADE	WEIGHT, KG/M
	SIDE, MM	LENGTH, MM				
Yenakiiye I&SW	120	6,000, 9,000-12,000	TU U 27.1-00191193-023-2001	2ps, 2sp, 3ps, 3sp, 4ps, 4sp, 5ps, 5sp, 6ps, 6sp, 3Gps, 3Gsp, 5Gps, 5Gsp	GOST 380	110.96
	125			45, 50, 55, 60, 70, 75, 80, 85	GOST 14959	120.39
	130			GR40, GR60, GR460, 20MnSi	ASTM A-615	130.22
	140			SAE1006, SAE1008, SAE1010, SAE1012, SAE1017, SAE 1018, SAE1045 - 1080	ASTM A-29	151.02
	150			09G2S, 30GS, 20GS	ASTM A-510-03	173.37
Azovstal I&SW	100	6,000-11,800	TU U 14-2-1253-2000	2ps, 3ps, 5ps	DSTU 2651/ GOST 380	76.98
	120				GOST 1050	110.85
	125			55	GOST 14959	120.47
	130			65, 70, 80, 85	GOST 14959	129.69
	140				ASTM A510M	150.88
	150			1050, 1055, 1060, 1065, 1070, 1075, 1080		173.65
	170					222.64
	200			Sv08G1NMA	TU U 27.1-4-548-2003	307.92

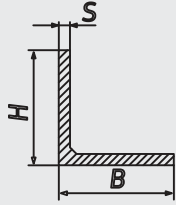
Square bars



MILL	SIZES		STANDARD OR TECHNICAL CONDITION	STEEL GRADE	STANDARD FOR STEEL GRADE	WEIGHT, KG/M	
	SIDE, MM	LENGTH, MM					
Makiivka Branch of Enakiive I&SW*	18	4,000-12,000	DSTU 4746/ GOST 2591 DSTU 4484/ GOST 535	St0, St3-St6	DSTU2651/ GOST 380	2.543	
	19					2.834	
	20					3.140	
	21			GOST 1050	10-60	GOST 1050	3.462
	22		3.799				
	23			GOST 14959	65-85, 60G-70G, 55S2, 55S2A, 60S2, 60S2A	GOST 14959	4.153
	24		4.522				
	25			GOST 4543	45H, 50H, 35G2, 45G2, 30HGS, 38HGSA, 38HS, 30HGT, 40HN	GOST 4543	4.906
	26		5.307				
	27		5.723				
	28			GOST 19281	18G2S, 09G2, 09G2D, 14G2	GOST 19281	6.154
	29		6.602				
	30		7.065				
	32		8.038				
	34		9.075				
	35		9.616				
	36		10.174				
38	11.335						
40	12.560						
42	13.847						
45	15.896						
Promet Steel	10	6,000-11,800	EN 10059 DSTU 4746*/ GOST 2591	S 235JR/S275JR S355JR	EN 10025 – 1, 2	0.785	
	12			C45	EN 10083 – 1, 2	1.13	
	14			St3ps/sp	GOST 535/ GOST 380	1.54	
	16			20, 45	GOST 535/ GOST 380	2.01	
	20				GOST 1050	3.14	

* Production must be agreed with the mill.

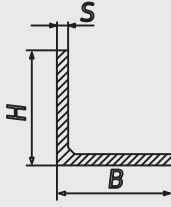
Equal angles



MILL	SIZES, MM				STANDARD OR TECHNICAL CONDITION		STEEL GRADE	STANDARD FOR STEEL GRADE	WEIGHT, KG/M
	H, MM	B, MM	S, MM	LENGTH, MM	FOR DESIGN AND SIZES	FOR TECHNICAL REQUIREMENTS			
Azovstal I&SW*	90	90	9	4,000-12,000	DSTU 2251/ GOST 8509 TU U 27.1-0019115 8-073-2008	DSTU 4484/ GOST 535 GOST 19281 GOST 6713 EN 10025	3ps, 3sp	DSTU 2651/ GOST 380	12.20
	90	90	10						13.477
	100	100	8						12.25
	100	100	10						15.10
	100	100	12						17.90
	100	100	14						20.63
	100	100	16						23.30
	120	120	9						16.58
	120	120	10						18.31
	120	120	11						20.03
	120	120	12						21.74
	125	125	8						15.46
	125	125	9						17.30
	125	125	10						19.10
	125	125	12						22.68
	130	130	8						16.08
	130	130	10						19.88
	130	130	11						21.76
	130	130	12						23.62
	130	130	13						25.46
	130	130	14						27.29
	130	130	15						29.11
	140	140	9						19.41
	140	140	10						21.45
	140	140	12						25.50
	140	140	13						27.51
	140	140	14						29.49
	140	140	15						31.46
	150	150	10						23.02
	150	150	11						25.21
150	150	12	27.39						
150	150	13	29.55						
150	150	14	31.69						
150	150	15	33.82						
150	150	16	35.93						
150	150	18	40.11						
160	160	10	24.67						

* Full product range is indicated. Production must be agreed with the mill.

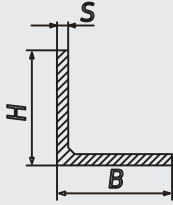
Equal angles



MILL	SIZES, MM				STANDARD OR TECHNICAL CONDITION		STEEL GRADE	STANDARD FOR STEEL GRADE	WEIGHT, KG/M
	H, MM	B, MM	S, MM	LENGTH, MM	FOR DESIGN AND SIZES	FOR TECHNICAL REQUIREMENTS			
Azovstal I&SW*	160	160	11	4,000-12,000	DSTU 2251/ GOST 8509 TU U 27.1-0019115 8-073-2008	DSTU 4484/ GOST 535 GOST 19281 GOST 6713 EN 10025	3ps, 3sp	DSTU 2651/ GOST 380	27.02
	160	160	12						29.35
	160	160	14						34.20
	160	160	15						36.25
	160	160	16						38.52
	160	160	17						40.77
	160	160	18						43.01
	160	160	20						47.41
	200	200	12						36.97
	200	200	13						39.92
	200	200	14						42.80
	200	200	16						48.65
	200	200	18						54.40
	200	200	20						60.08
	200	200	24						71.26
	200	200	25						74.02
	200	200	26						76.76
	200	200	28						82.19
200	200	30	87.56						
Yenakiiieve I&SW	75	75	6	12,000 max	DSTU 2251/ GOST 8509	DSTU 4484/ GOST 535 GOST 19281 EN10025	St3ps, St3sp, St5ps, St5sp,	DSTU 2651/ GOST 380	6.89
	75	75	8						9.02
	90	90	7						9.64
	90	90	8						10.93
	90	90	9						12.20
	100	100	7						10.79
	100	100	8						12.25
	100	100	10						15.10
	100	100	12						17.90
						S235, S275	EN 10025		

* Full product range is indicated. Production must be agreed with the mill.

Equal angles

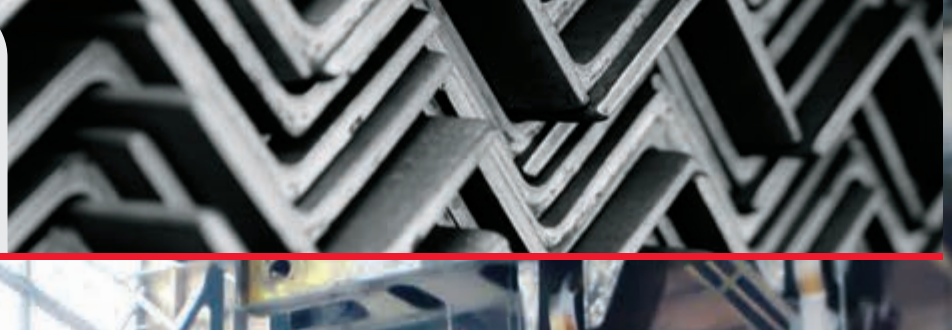
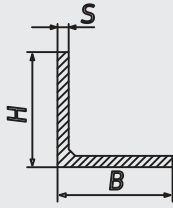


MILL	SIZES, MM				STANDARD OR TECHNICAL CONDITION		STEEL GRADE	STANDARD FOR STEEL GRADE	WEIGHT, KG/M
	H, MM	B, MM	S, MM	LENGTH, MM	FOR DESIGN AND SIZES	FOR TECHNICAL REQUIREMENTS			
Makiivka Branch of Enakiive I&SW*	25	25	3	4000-12000	DSTU 2251/ GOST 8509	DSTU 4484/ GOST 535 GOST 19281** EN 10025**	St0, St1kp, St1sp, St3kp St2sp, St3ps St3sp, St4sp, St5sp	DSTU 2651/ GOST 380	1,12
	25	25	4						1,46
	28	28	3						1,27
	30	30	3						1,36
	30	30	4						1,78
	32	32	3						1,46
	32	32	4						1,91
	35	35	3						1,60
	35	35	4						2,10
	35	35	5						2,58
	40	40	3				1,85		
	40	40	4				2,42		
	40	40	5				2,98		
	45	45	3				2,08		
	45	45	4				2,73		
	45	45	5				3,37		
	50	50	3				2,32		
	50	50	4				3,05		
	50	50	5				3,77		
	50	50	6				4,47		
56	56	4	3,44						
56	56	5	4,25						
63	63	4	3,90						
63	63	5	4,81						
63	63	6	5,72						

* Full product range is indicated. Production must be agreed with the mill.

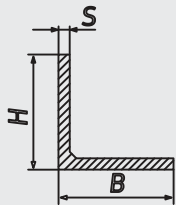
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Equal angles



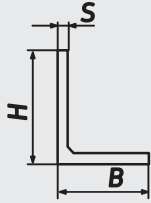
MILL	SIZES, MM				STANDARD OR TECHNICAL CONDITION		STEEL GRADE	STANDARD FOR STEEL GRADE	WEIGHT, KG/M				
	H, MM	B, MM	S, MM	LENGTH, MM	FOR DESIGN AND SIZES	FOR TECHNICAL REQUIREMENTS							
Promet Steel	25	25	3	6,000-12,000	EN 10056-1,2	EN 10056-1,2	S235JR, S275JR, S355JR	EN 10025-1,2	1.12				
	25	25	4						1.45				
	25	25	5						1.77				
	30	30	3						1.36				
	30	30	4						1.78				
	30	30	5						2.18				
	35	35	3						GOST 8509	GOST 535	St3sp/ps	GOST 380	1.60
	35	35	4										2.10
	35	35	5										2.57
	40	40	3										1.84
	40	40	4										2.42
	40	40	5										2.97
	40	40	6						3.52				
	45	45	4						2.74				
	45	45	4,5						3.06				
	45	45	5		3.38								
	45	45	6		4.00								
	50	50	4		3.05								
	50	50	5		3.77								
	50	50	6		4.47								
	1	1	1/8		6,000-12,000	ASTM A6M	ASTM A6M	ASTM A36M Gr50	ASTM A36M ASTM 529M	0.80			
	1	1	5/32							0.97			
	1	1	3/16							1.16			
	1	1	1/4							1.49			
	1 1/4	1 1/4	1/8							1.01			
	1 1/4	1 1/4	5/32							1.28			
	1 1/4	1 1/4	3/16							1.48			
	1 1/4	1 1/4	1/4							1.92			
	1 1/2	1 1/2	1/8							1.23			
	1 1/2	1 1/2	5/32							1.52			
	1 1/2	1 1/2	3/16							1.80			
	1 1/2	1 1/2	1/4							2.34			
	1 3/4	1 3/4	5/32							1.80			
1 3/4	1 3/4	3/16	2.12										
1 3/4	1 3/4	1/4	2.77										
2	2	5/32	2.10										
2	2	3/16	2.44										
2	2	1/4	3.19										

Equal angles



MILL	SIZES, MM				STANDARD OR TECHNICAL CONDITION		STEEL GRADE	STANDARD FOR STEEL GRADE	WEIGHT, KG/M
	H, MM	B, MM	S, MM	LENGTH, MM	FOR DESIGN AND SIZES	FOR TECHNICAL REQUIREMENTS			
Promet Steel	25	25	3.2	6000-12000	ASTM A6M	ASTM A6M	ASTM A36 Gr50	ASTM A36 ASTM 529	1.19
	25	25	4.0						1.45
	25	25	4.8						1.72
	25	25	6.4						2.22
	32	32	3.2						1.51
	32	32	4.0						1.91
	32	32	4.8						2.20
	32	32	6.4						2.85
	38	38	3.2						1.82
	38	38	4.0						2.225
	38	38	4.8						2.67
	38	38	6.4						3.49
	44	44	4.0						2.68
	44	44	4.8						3.15
	44	44	6.4						4.12
	51	51	4.0						3.12
	51	51	4.8						3.62
51	51	6.4	4.75						

Unequal angles

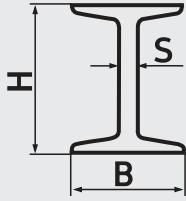


MILL	SIZES, MM				STANDARD OR TECHNICAL CONDITION		STEEL GRADE	STANDARD FOR STEEL GRADE	WEIGHT, KG/M				
	H, MM	B, MM	S, MM	LENGTH, MM	FOR DESIGN AND SIZES	FOR TECHNICAL REQUIREMENTS							
Azovstal I&SW*	160	100	9	4,000-12,000**	GOST 8510	DSTU 4484/ GOST 535	3ps, 3sp	DSTU 2651/ GOST 380	17.96				
	160	100	10						19.85				
	160	100	12						23.58				
	160	100	14			GOST 8510	GOST 6713	15HSND, category 1	GOST 6713	27.26			
	200	125	11							27.37			
	200	125	12							GOST 19281	09G2S, 09G2SD, 15HSND	GOST 19281	29.74
	200	125	14										34.43
200	125	16	39.07										
Yenakiieve I&SW	125	80	8	12,000	GOST 8510	DSTU 4484/ GOST 535	St3ps, St3sp, St5ps, St5sp 09G2S	DSTU 2651/ GOST 380	12.58				
	125	80	10						15.47				
	125	80	12						18.34				
Makiivka Branch of Enakiive I&SW*	45	28	3	4,000-12,000	GOST 8510	DSTU 4484/ GOST 535	St0, St3-St6	DSTU 2651/ GOST 380	1.68				
	45	28	4						2.20				
	50	32	3						1.9				
	50	32	4			GOST 19281**		18G2, 09G2, 09G2D, 14G2	GOST 19281	2.4			
	56	36	4							2.81			
	56	36	5							3.46			
	63	40	4							3.17			
	63	40	5							3.91			
	63	40	6							4.63			
63	40	8	6.03										

* Full product range is indicated. Production must be agreed with the mill.

** Production must be agreed with the mill.

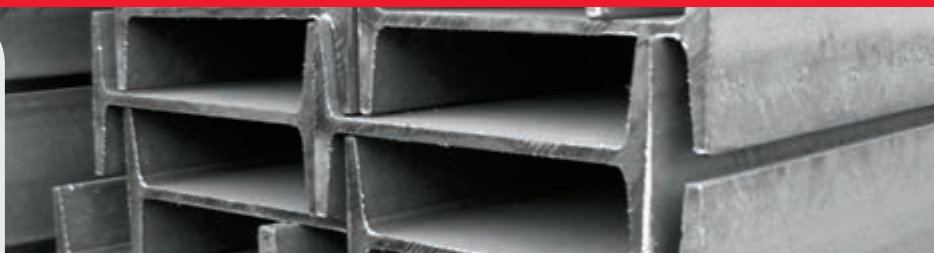
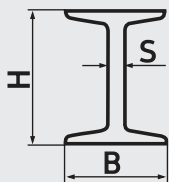
Beams



PRODUCT	MILL	SIZES, MM				STANDARD OR TECHNICAL CONDITION		STEEL GRADE	STANDARD FOR STEEL GRADE	WEIGHT, KG/M					
		H, MM	B, MM	S, MM	LENGTH, MM	FOR DESIGN AND SIZES	FOR TECHNICAL REQUIREMENTS								
Carbon and low-alloy I-beams: №14 №16 №18 №20 №30 №36 №45	Azovstal I&SW	140	73	4.9	4,000-12,000*	GOST 8239	DSTU 4484/ GOST 535	St3ps, St3sp	DSTU 2651/ GOST 380	13.7 15.9 18.4 21 36.5 48.6 66.5					
Special design beams: №24M №36M №36S №45M		240	110	8.2							GOST 19425	EN 10025	S235JR	EN 10025	38.30 57.90 71.30 77.60
Strengthened I-beams for monorail tracks		162	70	7.0		TU U 14-2-1225-1999									
For monorail tracks: M155 M155U		155	68	16.2		4,000-12,000*					By customer request, TU U 27.1-26524137-1374:2008	By customer request, TU U 27.1-26524137-1374:2008	09G2S	GOST 19281	23.86 25.62
I-beam №19		155	68	17.0											
Carbon and low-alloy I-beam: №10 №12		Yenakiiye I&SW	100	55		4.5					6,000, 9,000, 12,000	GOST 8239	DSTU 4484/ GOST 535, GOST 19281	St3ps, St3sp, 09G2, St5ps, St5sp	DSTU 2651/ GOST 380, DSTU 4484/ GOST 535, GOST 19281
	120	64	4.8												

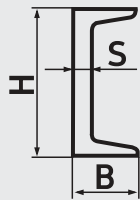
* Production of profiles up 12 m long must be agreed with the mill.

Beams



PRODUCT	MILL	SIZES, MM				STANDARD OR TECHNICAL CONDITION		STEEL GRADE	STANDARD FOR STEEL GRADE	WEIGHT, KG/M
		H, MM	B, MM	S, MM	LENGTH, MM	FOR DESIGN AND SIZES	FOR TECHNICAL REQUIREMENTS			
Carbon and low-alloy beam: I 80 I 100 I 120	Promet Steel	80 100 120	42 50 58	3.9 4.5 5.1	4,000-12,000	DIN 1025-1	EN 10024	S235JR, S275JR, S355JR	EN 10025 – 1, 2	5.94 8.34 11.10
Carbon and low-alloy beam with parallel flanges: IPE 80 IPE 100 IPE 120		80 100 120	45 55 64	3.8 4.1 4.4						

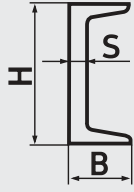
Channels



PRODUCT	MILL	SIZES, MM				STANDARD OR TECHNICAL CONDITION		STEEL GRADE	STANDARD FOR STEEL GRADE	WEIGHT, KG/M
		H, MM	B, MM	S, MM	LENGTH, MM	FOR DESIGN AND SIZES	FOR TECHNICAL REQUIREMENTS			
Carbon and low-alloy channels: №14U №16U №18U №20U №22U №24U №27U №30U	Azovstal I&SW	140	58	4.9	2,000-12,000*	DSTU 3436/ GOST 8240	DSTU 4484/ GOST 535	St3ps, St3sp	DSTU 2651/ GOST 380	12.30 14.20 16.30 18.4 21.00 24.00 27.70 31.80
160		64	5.0							
180		70	5.1							
200		76	5.2	GOST 19281		09G2S	GOST 19281			
220		82	5.4							
240		90	5.6							
270		95	6.0							
300	100	6.5								
Special channels for railcars construction: №18V №30V №30V-1 №30V-2	Azovstal I&SW	180	100	8.0	3,000-12,000*	GOST 5267.0, GOST 5267.1 DSTU 7551	GOST 19281	09G2S, 15HSND	GOST 19281	26.72 34.44 39.15 43.86
300		85	7.5							
300		87	9.5							
300		89	11.5							
Special channels for tractors: №24T	Azovstal I&SW	240	85	9.5	4,000-12,000	GOST 5422	DSTU 4484/ GOST 535	St5ps	DSTU 2651/ GOST 380	34.90
Special channel for railcars building №8V		80	45	5.5	6,000, 9,000, 12,000	GOST 5267.1	GOST 19281	09G2S	GOST 19281	9.26
Steel channels: №8U №10P №12P №14P	Yenakiiieve I&SW	80	40	4.5		DSTU 3436/ GOST 8240	DSTU 4484/ GOST 535	St3ps, St3sp St5ps, St5sp	DSTU 2651/ GOST 380	7.05 8.59 10.40 12.30
100		46	4.5							
120		52	4.8							
140		58	4.9							
Channels for trolleys: sp-10 sp-12	Yenakiiieve I&SW	100	55	9	GOST 21026	DSTU 4484/ GOST 535 GOST 19268	09G2, 14G2, St3ps	DSTU 2651/ GOST 380 GOST 19281	14.60 20.00	
120		60	11							

* Production of profiles up 12 m long must be agreed with the mill.

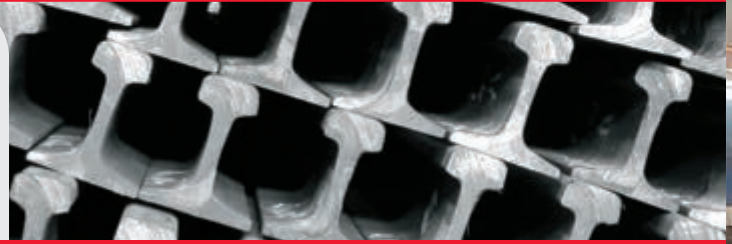
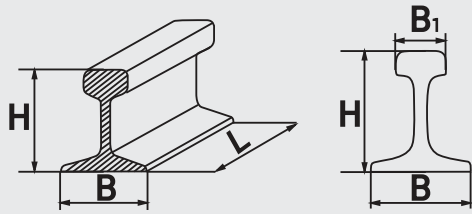
Channels



PRODUCT	MILL	SIZES, MM				STANDARD OR TECHNICAL CONDITION		STEEL GRADE	STANDARD FOR STEEL GRADE	WEIGHT, KG/M
		H, MM	B, MM	S, MM	LENGTH, MM	FOR DESIGN AND SIZES	FOR TECHNICAL REQUIREMENTS			
Nº5U* Nº6,5U* Nº8*	Makiivka Branch of Enakiive I&SW	50 65 80	32 36 40	4.4 4.4 4.5	4,000- 12,000	DSTU 3436/ GOST 8240	DSTU 4484/ GOST 535	St0, St3 kp/nS/sp St4 kp/pS/sp St5-St6 ps/sp	DSTU 2651/ GOST 380	4.84 5.90 7.05
U 80 U 100 U 120	Promet Steel	80 100 120	42 50 58	6.0 6.0 7.0	4,000 - 12,000	DIN 1026-1	EN 10279	S235JR S275JR S355JR	EN 10025 - 1,2	8.64 10.6 13.4
UPE 80* UPE 100* UPE 120*		80 100 120	50 55 60	4.0 4.5 5.0	4,000 - 12,000	DIN 1026-1	EN 10279	S235JR S275JR S355JR	EN 10025 - 1,2	7.90 9.82 12.1

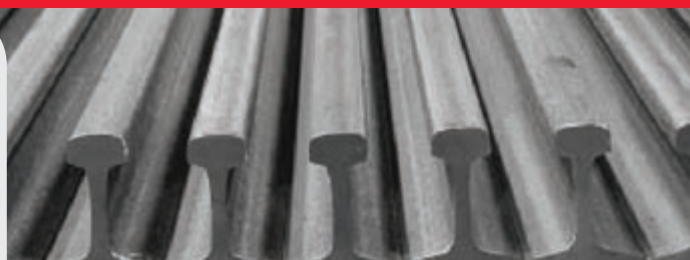
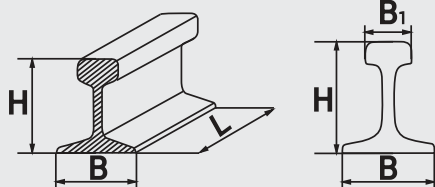
* Full product range is indicated. Production must be agreed with the mill.

Rails



PRODUCT	MILL	SIZES, MM				STANDARD OR TECHNICAL CONDITION		STEEL GRADE	WEIGHT, KG/M
		H, MM	B, MM	S, MM	LENGTH, MM	FOR DESIGN AND SIZES	FOR TECHNICAL REQUIREMENTS		
Rails for wide gauge railways R50 (Ukrsepro certificate)	Azovstal I&SW	152	132	72	25,000; 24,920; 24,840; 12,520; 12,500; 12,460; 12,420; 12,380	DSTU 4344 GOST P 51685	DSTU 4344 TU U27.1-26524137-1336-2005	K74F	51.80
Rails for wide gauge railways R65 (Ukrsepro certificate)		180	150	75	6,000-7,900; 8,000-12,400; 18,000-24,500	TU U14-2-1255-2000	DSTU 4344 TU U 27.1-26524137-1336-2005 TU U 27.1-26524137-1354:2007	K76F	64.88
Rails for normal gauge railways S49		149	125	70	12,420; 12,460; 12,500; 24,840; 24,920; 25,000	TU U 77-092-1261-2000 DSTU 4344;	TU U 77-092-1261-2000	900A	49.56
Rails for railways UIS60 (Ukrsepro certificate)		172	150	74.3	25,000; 24,920; 24,840; 12,520; 12,500; 12,460; 12,420; 12,380; 18,000	TU U27.1-31632138-1389-2011; UIC 860	DSTU 4344; TU U27.1-31632138-1389-2011; UIC 860	900A, K76F	60.34
Crane rails KR93		125	160	100	12,500; 25,000; 6,000-24,900	TU U 14-2-1236-99	TU U 14-2-1236-99	K73F	86.70
Crane rails: KP70 KP120		120 170	120 170	70 120	9,000; 9,500; 10,000; 10,500; 11,000; 11,500; 12,000; 4,000-12,000	DSTU 2484 (GOST4121)	DSTU 2484 (GOST 4121)	63	46.10 113.47
Hook flange guard rails GT-140PS		206.3	149.2	66.7	12,500; 25,000; 6,000-24,900	TU U 14-2-1235-99	TU U 14-2-1235-99	K76	72.436
Point rails: OR50 (Ukrsepro certificate) OR65 (Ukrsepro certificate)		112 140	132 132	74 77.5	specific cut length or fold $\leq 10000 \geq$	DSTU 4814	DSTU 4814	K73F	65.51 81.18
Rails for narrow gauge railways R34 (Ukrsepro certificate)		128	110	60	8,000; 10,000; 11,000	TT 232-14-2014	TT 232-14-2014	N50pS	34.1

Rails & rail fasteners



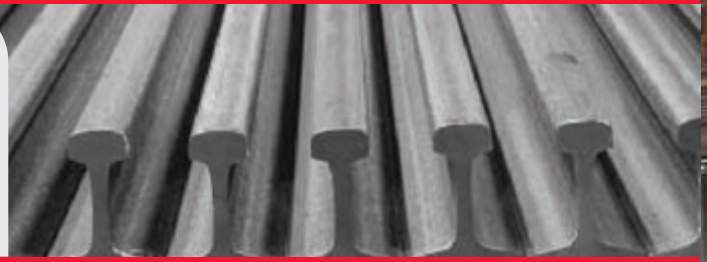
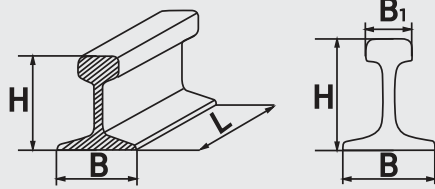
Rails

PRODUCT	MILL	SIZES, MM				STANDARD OR TECHNICAL CONDITION		STEEL GRADE	WEIGHT, KG/M
		H, MM	B, MM	S, MM	LENGTH, MM	FOR DESIGN AND SIZES	FOR TECHNICAL REQUIREMENTS		
Rails for narrow gauge railways R24 (Ukrsepro certificate)	Azovstal I&SW	108	92	51	8,000; 3,000-12,000; 7,870	DSTU 3799	DSTU 3799	60sp; 70sp	24.96
Rails for narrow gauge railways R18	Enakiive I&SW	90	80	40	8,000	DSTU 3799	DSTU 3799	60sp; 70sp	17.91

Rail fasteners

PRODUCT	MILL	STANDARD OR TECHNICAL CONDITION	
		FOR DESIGN AND SIZES	FOR TECHNICAL REQUIREMENTS
Spike fastening plates for R65 and R75 rails:D65 (Ukrsepro certificate)	Azovstal I&SW	GOST 8194	GOST 3280
Plates with separate fastening for R50, R65 and R75 rails 1KB50 (Ukrsepro certificate)		GOST 16277	GOST 16277
1KB65 (UKRSEPRO certificate)			
KD65 (UKRSEPRO certificate)			
Double headed fishplates for R50 rails 1R50 (UKRSEPRO certificate)		GOST 19128 TU U 27.1-31632138-1385:2011	TU U 27.1-31632138-1385:2011 GOST 4133
Double headed fishplates for R65 and R75: 1R65; 2R65 (Ukrsepro certificate)		GOST 8193 TU U 27.1-31632138-1385:2011	

Rails & rail fasteners



Rail fasteners

PRODUCT	MILL	STANDARD OR TECHNICAL CONDITION	
		FOR DESIGN AND SIZES	FOR TECHNICAL REQUIREMENTS
Special fishplates for isolated joints of R65 and R75 rails: 1 NR P65* (UKRSEPRO certificate)	Azovstal I&SW	TU U 77-092-1262-2000	TU U 77-092-1262-2000, GOST 4133
Fishplates for UIC 60 rails: UIC 60* (UKRSEPRO certificate)		TU U 27.1-31632138-1385:2011	TU U 27.1-31632138-1385:2011 GOST 4133
Special shins for insulated high-strength joints of R65 rails: 2SR65N*		TU U 32.30268559.045-2001	TU U 32.30268559.045-2001
Straps for rails of narrow gauge R18, R24, R33, R34**	Makiivka Branch of Enakiive I&SW	TU U 27 1-26524137-472	DSTU 2651/ GOST 380 DSTU 4484/ GOST 535
Clips for separate rail fastenings of railways (certified products)		GOST 22343	DSTU 2651/ GOST 380 DSTU 4484/ GOST 535
Embedded washers for concrete sleepers, type 1**		GOST 23157	GOST 19281
Base for D50 & D65, SD50 & SD65 spike fastenings for R50 and R65 rails**		GOST 12135 GOST 8194	DSTU 2651/ GOST 380 GOST 3280
Bases for narrow gauge R18, R24, R33, R34 rails**		TU U 27.1-33185989-007	DSTU 2651/ GOST 380 DSTU 4484/ GOST 535
Strip for clips for separate rail fastening of railways		Enakiive I&SW	GOST 22343

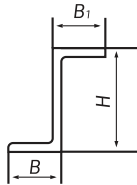
* Material is produced without drilling holes.

** Production must be agreed with the mill.

Profiles for special applications

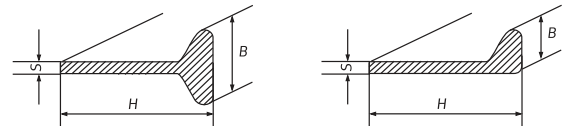


Z-section for beam



PRODUCT	MILL	SIZES, MM				STANDARD OR TECHNICAL CONDITION		STEEL GRADE	WEIGHT, KG/M
		H, MM	B, MM	S, MM	LENGTH, MM	FOR DESIGN AND SIZES	FOR TECHNICAL REQUIREMENTS		
Z-section for beam	Azovstal I&SW	174	130	310	3,000-12,000; 10,800; 12,700; 12,800	GOST 5267.3; TU U 27.1-00190319-131 1-2003	GOST 5267.0; GOST 19281	09G2S	66.52

Symmetrical and asymmetrical bulb flats for shipbuilding



PRODUCT	MILL	SIZES, MM				STANDARD OR TECHNICAL CONDITION		STEEL GRADE	STANDARD FOR STEEL GRADE	WEIGHT, KG/M
		H, MM	B, MM	S, MM	LENGTH, MM	FOR DESIGN AND SIZES	FOR TECHNICAL REQUIREMENTS			
Symmetrical:	Yenakiiyeve I&SW									
№1235		120	37.5	5.5	9,000, 12,000	GOST 9235	GOST 5267.0; GOST 19281	A, A32, D32, D40	GOST 5521	7.96
№1446		140	42	6						
№1455		140	48	5.5						
№1646		160	48.5	6.5						
Asymmetrical:										
№10	100	26	6	9,000, 12,000	GOST 21937	GOST 5521	A, A32, D32, D40	GOST 5521	6.76	
№12	120	30	6.5							
№14a	140	33	7							
№14b	140	35	9							
№16a	160	36	8							
№16b	160	38	10							
№18a	180	40	9							
№18b	180	42	11							

Profiles for special applications



Sections for mine timbering

PRODUCT	MILL	SIZES, MM				STANDARD OR TECHNICAL CONDITION		STEEL GRADE	WEIGHT, KG/M
		B, MM	B ₁ , MM	H, MM	LENGTH, MM	FOR DESIGN AND SIZES	FOR TECHNICAL REQUIREMENTS		
SVP 19 SVP 22 SVP 27 SVP 33 (all - with Ukrsepro certificate)	Azovstal I&SW	136.0 145.5 149.5 166.0	60.0 60.0 59.5 66.0	102.0 110.0 123.0 137.0	3,000-12,000	GOST 18662	DSTU 4484/ GOST 535 TU 14-1-2493-2007 TU U 24.1-00185790-110:2014	St5pS 20G2AF 20G2AF	19.20 21.90 27.00 33.39

Structural shapes for sidewalls of drag conveyor pans

PRODUCT	MILL	SIZES, MM				STANDARD OR TECHNICAL CONDITION		STEEL GRADE	WEIGHT, KG/M
		B, MM	B ₁ , MM	H, MM	LENGTH, MM	FOR DESIGN AND SIZES	FOR TECHNICAL REQUIREMENTS		
SP190 SP 192 SP 205 SP 228 SPC230 SP245 SP255D	Azovstal I&SW	120 100 100 110 110 140 125	85 85 100 85 95 100 105	190 192 205 228 230 245 255	9,200; 9,250; 2,000-10,000	TU U 27.1-26524137-1355:2007	TU U 27.1-26524137-1355:2007	25GSPD, 25HG2SPF	45.84 53.87 55.12 66.30 78.19 72.52 97.20

Steel bar for mill rods

PRODUCT	MILL	DIAMETER, MM	LENGTH, MM	STANDARD OR TECHNICAL CONDITION		STEEL GRADE	WEIGHT, KG/M
				FOR DESIGN AND SIZES	FOR TECHNICAL REQUIREMENTS		
Hot rolled rounds for barrel mill rods	Azovstal I&SW	100	up to 4,000; 4,000-12,000	TU 14-1-1586-2006, DSTU 4738/ GOST 2590	TU 14-1-1586-2006; By customer request	K76	61.654

⁴ Full product range is indicated. Production must be agreed with the mill.

Profiles for special applications

Shapes for lift guides

PRODUCT	MILL	SIZES, MM				STANDARD OR TECHNICAL CONDITION		STEEL GRADE	STANDARD FOR STEEL GRADE	WEIGHT, KG/M
		H, MM	W, MM	T, MM	LENGTH, MM	FOR DESIGN AND SIZES	FOR TECHNICAL REQUIREMENTS			
№3* №3A*	Yenakiieve I&SW	62 67	90x37 71x31	20 18	Max 12,000	TU U 27.1-26524137- 203-2005	GOST 1050	30sp	GOST 1050	14.8 11.7

* Production must be agreed with the mill

Hot rolled steel for bow spring

PRODUCT	MILL	SIZES, MM			STANDARD OR TECHNICAL CONDITION		STEEL GRADE	STANDARD FOR STEEL GRADE	WEIGHT, KG/M
		B, MM	H, MM	LENGTH, MM	FOR DESIGN AND SIZES	FOR TECHNICAL REQUIREMENTS			
Hot rolled steel for bow spring*	Makiivka Branch of Enakiive I&SW	75 75 90 90	8.0 9.5 10.0 12.0	2,000- 6,000	GOST 7419	GOST 14959	65-80, 60G-70G, 55S2, 55S2 A, 60S2, 60S2A	GOST 14959	4.70 5.58 7.05 8.45

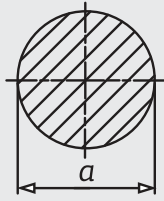
* Production must be agreed with the mill

Rolled shapes for grinding mill lining

PRODUCT	MILL	SIZES, MM			STANDARD OR TECHNICAL CONDITION		STEEL GRADE	STANDARD FOR STEEL GRADE	WEIGHT, KG/M
		B, MM	H, MM	LENGTH, MM	FOR DESIGN AND SIZES	FOR TECHNICAL REQUIREMENTS			
Type MP-4	Azovstal I&SW	445	168	7,500- 10,500**	TU U 27.1-4-513- 2001	TU U 27.1-4-513- 2001	70GF	TU U 27.1- 4-513-2001	412.5

** Production of certain length profiles must be agreed with the mill.

Grinding balls



MILL	DIAMETER, MM		STANDARD OR TECHNICAL CONDITION		HARDNESS, MIN HPC/HB					NOMINAL WEIGHT, KG
	CONDITIONAL	NOMINAL	FOR DESIGN AND DIMENSIONS	FOR TECHNICAL REQUIREMENTS	1 GROUP	2 GROUP	3 GROUP	4 GROUP		
								ON BALL SURFACE	AT A DEPTH EQUAL TO 0.5 OF THE RADIUS	
Azovstal I&SW	40	41,5	GOST 7524 DSTU 3499	GOST 7524 DSTU 3499	43/401	49/461	55/534	55/534	45/415	0.294
	60	62								0.98
	80	83			40/352	42/375	52/495	52/495	40/352	2.35
	100	104								4.62
	120	125			35/302	38/331	50/477	50/477	35/321	8.03

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