



99812 (9.5")

C095263


PJSC DNIPROSPETSSTAL, YUZHNOYE SHOSSE 81, 69008 ZAPOROZHYE, UKRAINE

	Contract No.: 50005 TECHN.PROTOCOL № 390-11 SPEC.№1144/P030989-ED DIN EN 10088-3-05,DIN EN 10272-08,DIN EN 10222-5-00,AD2000-Merkblatt.W2;AD 2000-Merkblatt W10;ASTM A182/A182M-10;ASME SA-182/SA-182M-10;ASTM A276-10;ASTM A314-08,ASTM A479/A479M-10;ASME SA-479/SA-479M-10;ASTM A484/A484M-10;AMS-QQ-S-763B-06 Cond.A;AMS 5648K-07;AMS 5653F-07;ASTM A193/A193M-10GR B8M,CL1; ASME SA-193/SA-193M-10 GR B8,CL 1 ;ASTM A320/A320M-08 GR B8M,CL 1;ASMB SA-320/SA-320M-10 GR B8,CL1;NACE MR 0175-03;NACE MR 0103-10	Sheets:7 Sheet: 6 QUALITY CERTIFICATE EN10204/3.1 Nr.277141 PLANT ORDER № 8014901144
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 GMS Certified	CUSTOMER DSS INTERNATIONAL SA Switzerland	PRODUCT DESCRIPTION Bars and rods of corrosion-resistant (stainless) steel forged, peeled.Прутки из коррозионностойких (нержавеющих) сталей ковачные, обточенные. STEEL MAKING PROCESS: EAF+AOD СПОСОБ ВЫПЛАВКИ: Электродуговая печь+АКР Round 9.500in/241.30 mm L=4.920m/16.131ft Grade: 316/316L/1.4401/1.4404	QUANTITY: (number of pcs) 1bund Q-4074 lb/1848 kg Delivery condition solution annealed :1922° F(1050° C)water 21minutes термообработка:закалка в воду
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ANALYSIS, %	C	Si	Mn	P	S	Cr	Ni	Mo	Al	Cu	V	W	Ti	Co	Nb	N ₂	Sn	B
REQUIRED	<.030	<1.00	1.20-2.00	<.040	.015-.030	16.50-18.00	10.00-13.00	2.00-2.50	<.10	<.40	<.10	<.20	<.15	<.40	<.20	<.10		
CAST № 99812	.021	.42	1.33	.035	.025	17.15	10.25	2.07	.069	.28	.04	.12	.005	.08	.013	.030	.011	.0015

DIN EN 10002-1,ASTM A370-09										TECHNICAL REQUIREMENTS: Macrostructure – GOOD GRAIN SIZE: 5 to ASTM E 112-96(2004) Nonmetallic inclusions ASTM E 45-05 (Method A) <table style="width:100%; text-align: center;"> <tr> <td>A</td><td>B</td><td>C</td><td>D</td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td>thin</td><td>thick</td><td>thin</td><td>thick</td><td>thin</td><td>thick</td><td>thin</td><td>thick</td><td>thin</td><td>thick</td> </tr> <tr> <td>3.0</td><td>2.0</td><td>2.0</td><td>1.5</td><td>0.0</td><td>0.0</td><td>1.0</td><td>1.0</td><td></td><td></td> </tr> </table> ICC-ASTM A262-08 (practice E)-test: O.K. Dimension/surface defects test, anti-mixing test – OK										A	B	C	D							thin	thick	thin	thick	thin	thick	thin	thick	thin	thick	3.0	2.0	2.0	1.5	0.0	0.0	1.0	1.0		
A	B	C	D																																														
thin	thick	thin	thick	thin	thick	thin	thick	thin	thick																																								
3.0	2.0	2.0	1.5	0.0	0.0	1.0	1.0																																										
MECHANICAL PROPERTIES	Yield Strength, (N/mm ²) R0.2% R 1.0%		Tensile Strength, Rm, (N/mm ²)	Elongation		Reduction of area, Z % L	Brinell Hardness HB	Impact strength, KV, J																																									
				A ₅ % L Q	In 2 inches (50mm) or 4D, min,% L			L	Q																																								
REQUIRED	205	240	515-690	45 35	40	50	140-223	100	60																																								
EFFECTIVE	307	342	588	60 55	57	78	170	265 261 268	61 61 61																																								

US - testing	yes	Results: ASME SA-388/SA-388M-10(AS1M A 388/A 388M-09)-FBH1/8";EN 10228-4 type 1a;class 3:OK	Manufacturer: PJSC DNIPROSPETSSTAL Date: 09.10.13 Manager of quality assurance department - V. Kapaieva Signed:  Zaporozhye Made in Ukraine.
Radiation free; mercury free. No Weld or Weld repair.			