



98210 (15°)

C065862

**PJSC DNIPROSPETSSTAL, YUZHNOYE SHOSSE 81, 69008 ZAPOROZHYE, UKRAINE**

	Contract No.: 50005 TECHN.PROTOCOL № 210-11 SPEC.№ 7049/P027673-ED 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-10 GR B8M,CL1 ;ASME SA-193/SA-193M-10GR B8M,CL1;ASTM A320/A320M-08GR B8M,CL 1;ASME SA-320/SA-320M-10 GR B8M,CL 1;NACE MR 0175-03;NACE MR 0103-10		Sheets:7 Sheet: 6 <b>QUALITY CERTIFICATE EN10204/3.1 Nr.264682</b> PLANT ORDER № 8014907049
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 QMS Certified	CUSTOMER <b>DSS INTERNATIONAL SA</b> Switzerland	<b>PRODUCT DESCRIPTION</b> Bars and rods of corrosion-resistant (stainless) steel forged, peeled Прутки из коррозионностойких (пержавеющих) сталей кованные, обточенные <b>STEEL MAKING PROCESS: EAF+AOD</b> <b>СПОСОБ ВЫПЛАВКИ: Электродуговая печь,+АКП</b> Round 15.00in/381.00 mm L=4.435m/14.541ft; Grade: 316/F316/316L/F316L	QUANTITY: 1bund Q-9127 lb/4140kg (number of pcs)
			Delivery condition solution annealed :1900-2010° F(1040-1100°C)/water(30 minytes) термообработка:закалка в воду

ANALYSIS, %	C	Si	Mn	P	S	Cr	Ni	Mo	Al	Cu	V	W	Ti	Co	Nb	N <sub>2</sub>		
REQUIRED	<.030	<1.00	1.25-2.00	<.040	.020-.030	16.00-18.00	10.00-14.00	2.00-3.00	<.10	<.40	<.10	<.20	<.15	<.40	<.20	<.10		
CAST № 98210	.029	.34	1.32	.038	.024	16.90	10.18	2.10	.055	.25	.04	.15	.005	.08	.011	.0330		

ASTM A370

MECHANICAL PROPERTIES	Yield Strength, Ksi(N/mm <sup>2</sup> ) Re (R <sub>0.2</sub> )	Tensile Strength, Rm,ksi (N/mm <sup>2</sup> )	Elongation A <sub>5</sub> %	Reduction of area, Z, %	Brinell Hardness HB	Impact strength, KV, J
REQUIRED	36(248)	75 (515)	45	50	140-223	100
EFFECTIVE	41.2(283)	80.2(551)	61	77	163	248

TECHNICAL REQUIREMENTS:

Macrostructure - GOOD  
 GRAIN SIZE : 5 to ASTM E 112-96(2004)  
 Nonmetallic inclusions ASTM E 45-05 (Method A)  


	A	B	C	D			
	thin	thick	thin	thick	thin	thick	thin
	2.0	2.0	2.0	1.0	0.0	0.0	1.0

 ICC-ASTM A262-08 (practice E)-test: O.K.  
 Dimension/surface defects test, anti-mixing test - OK

Mechanical properties tested in state of delivery

US - testing	yes	Results: «ASTM A-388 FBH 1/5''(5.08mm)»
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Radiation free; mercury free. No Weld or Weld repair.

Manufacturer: PJSC DNIPROSPETSSTAL  
 Date: 06.08.12 Manager of quality assurance department - V. Kapaieva  
 Signed: 

Zaporozhye  
 Made in Ukraine.

12"