



98210 (13")

006586


**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-10 GR B8M, CL1; ASTM A320/A320M-08 GR B8M, CL 1; ASME SA-320/SA-320M-10 GR B8M, CL 1; NACE MR 0175-03; NACE MR 0103-10	Sheets: 7                      Sheet: 5 <b>QUALITY CERTIFICATE</b> EN10204/3.1 Nr.264682 PLANT ORDER № 8014907049
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 <p>QMS Certified</p>	<b>CUSTOMER</b> DSS INTERNATIONAL SA Switzerland	<b>PRODUCT DESCRIPTION</b> Bars and rods of corrosion-resistant (stainless) steel forged, peeled Прутки из коррозионностойких (нержавеющих) сталей кованные, обточенные <b>STEEL MAKING PROCESS: EAF+AOD</b> <b>СПОСОБ ВЫПЛАВКИ: Электродуговая печь+AOP</b> Round 13.00in/330.20 mm L=3.045m/9.984ft; <b>Grade: 316/F316/316L/F316L</b>	QUANTITY:                      1bund Q-4705 lb/2134kg (number of pcs)  Delivery condition solution annealed : 1900-2010° F(1040-1100°C)/water(30 minytes) 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 <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							<b>TECHNICAL REQUIREMENTS:</b> 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 thick 2.0 2.0 2.0 1.0 0.0 0.0 1.0 1.0 ICC-ASTM A262-08 (practice E)-test: O.K. Dimension/surface defects test, anti-mixing test - OK
MECHANICAL PROPERTIES	Yield Strength, Ksi(N/mm <sup>2</sup> ) Re (R <sub>e2</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	40 (275)	79.6(547)	62	79	163	264	
Mechanical properties tested in state of delivery							

US - testing	yes	Results: «ASTM A-388 FBH 1/5''(5.08mm)»	Manufacturer: PJSC DNIPROSPETSSTAL Date: 06.08.12 Manager of quality assurance department - V. Kapaieva                      Signed: 
Radiation free; mercury free. No Weld or Weld repair.			Zaporozhyc Made in Ukraine.