



97009

C045821

PJSC DNIPROSPETSSTAL, YUZHNOYE SHOSSE 81, 69008 ZAPOROZHYE, UKRAINE

	Contract No.: 50005 TECHN.PROTOCOL № 210-11 SPEC.№4095/P025089-ED ASTM A182/A182M-10;ASME SA-182/SA-182M-10;ASTM A276-10;ASTM A314-08;ASTM A479A479M-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 (EXC PAR 7.2);ASME SA-193/SA-193M-10GR B8M,CL1(EXC PAR 7.3);NACE MR 0175-03;NACE MR 0103-10	Sheets:7 Sheet: 4 QUALITY CERTIFICATE EN10204/3.1 Nr.253305 PLANT ORDER № 8014904095
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 DSS Certified	CUSTOMER DSS INTERNATIONAL SA Switzerland	PRODUCT DESCRIPTION Bars and rods of corrosion-resistant (stainless) steel, hot rolled, peeled on Landgraf line.Прутки из коррозионностойких (нержавеющих) сталей горячекатаные обточенные на линии «Ландграф». STEEL MAKING PROCESS: EAF/AOD СПОСОБ ВЫПЛАВКИ: Электродуговая печь+АКР Round 6.250in/158.75 mm L-3.400-5.500m/11.148-18.033ft Grade: 316/F316/316L/F316L	QUANTITY: 1bund Q-3633 lb/1648 kg (number of pcs) 1bund Q-1720 lb/780 kg
			Delivery condition solution annealed :1900-2010 ^o F(1040-1100 ^o C)/water термообработка:закалка в воду

ANALYSIS, %	C	Si	Mn	P	S	Cr	Ni	Mo	Al	Cu	V	W	Ti	Co	Nb	N ₂		
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 № 97009	.018	.37	1.38	.035	.023	16,93	10.11	2.05	.063	.20	.06	.12	.100	.07	.011	.0310		

ASTM A370-08a							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 thick 2.5 2.0 1.5 1.5 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 ²) Re (R _{eL})	Tensile Strength, Rm,ksi (N /mm ²)	Elongation A ₅ %	Reduction of area, Z %	Brinell Hardness HB	Impact strength, KV, J	
REQUIRED	36(248)	75 (515)	45	50	140-223	100	
EFFECTIVE	41.8(287)	82.4(566)	60	79	167	215	

Mechanical properties tested in state of delivery

US - testing	yes	Results: SEP 1921,group 3/class Dd - O.K.
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Radiation free; mercury free. No Weld or Weld repair.	Manufacturer: PJSC DNIPROSPETSSTAL Date: 03.10.11 Manager of quality assurance department - V. Kapaieva Signed:  Zaporozhye Made in Ukraine.
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