



96917 (11").

C045824


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 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: 5 QUALITY CERTIFICATE EN10204/3.1 Nr.253305 PLANT ORDER № 8014904095
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 QMS Certified	CUSTOMER DSS INTERNATIONAL SA Switzerland	PRODUCT DESCRIPTION Bars and rods of corrosion-resistant (stainless) steel forged, peeled .Прутки из коррозионностойких (нержавеющих) сталей кованные, обточенные. STEEL MAKING PROCESS: EAF+AOD СПОСОБ ВЫПЛАВКИ:Электродуговая печь+АКР Round 11.000in/279.40 mm L=3.720m/12.197ft L=4.180m/13.705ft Grade: 316/F316/316L/F316L	QUANTITY: 1bund Q-4145 lb/1880 kg (number of pcs) 1bund Q-4608 lb/2090 kg Delivery condition solution annealed : 1900-2010° F(1040-1100° C)/water 18 minytc 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		
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 № 96917	.022	.32	1.45	.035	.027	16,96	10.06	2.08	.050	.24	.04	.11	.077	.09	.01	.0300		

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 2.0 1.0 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 ²) Re (R _{e2})	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	42.4(291)	86.5(594)	58	75	174	215	
Mechanical properties tested in state of delivery							

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