

ASA PO 77032 **97167** Wp 5701 + 5708 CPA 6 F0E 40/80

0649552

PJSC DNIPROSPETSSTAL, YUZHNOYE SHOSSE 81, 69008 ZAPOROZHYE, UKRAINE

	Contract No.: 50005 TECHN. PROTOCOL № 210-11 SPEC. №4515/P025498-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 320/A320M-08GR B8M,CL 1; ASME SA-320/SA-320M-10 GR B8M,CL 1; <u>NACE MR 0175-03</u> ; <u>NACE MR 0103-10</u>	Sheets: 8 Sheet: 3 QUALITY CERTIFICATE EN10204 3.1 Nr.255465 PLANT ORDER № 8014904515
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	CUSTOMER DSS INTERNATIONAL SA Switzerland <i>ok 3/30/12</i>	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+AOP Round 9,000m/228.60 mm L=3,420m/11,213ft L=3,940m/12,918ft Grade: 316/F316/316L/F316L.	QUANTITY: (number of pcs) 1bund Q-2557 lb/1160 kg 1bund Q-2932 lb/1330 kg
	Delivery condition solution annealed : 1904 ⁰ F(1040 ⁰ C) water 16 minutes 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 Heat № 97167	.021	.32	1.30	.034	.023	16.96	10.17	2.00	.066	.24	.05	.12	.090	.10	.018	.0320		

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 3.0 2.0 2.0 2.0 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	38.8(264)	82.2(559)	59	75	163	179													

Mechanical properties tested in state of delivery															
US - testing	yes	Results: «ASTM A388 FBH 1/5 “»	Manufacturer: PJSC DNIPROSPETSSTAL Date: 29.11.11 Manager of quality assurance department - V. Kapaieva Signed:												
Radiation free; mercury free. No Weld or Weld repair.			Zaporozhye Made in Ukraine.												

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