


ASA PO 76892 WO 5596 CPA 4 FOE 40 96481 4st wo 5596 40"

PJSC DNIPROSPETSSTAL, YUZHNOYE SHOSSE 81, 69008 ZAPOROZHYE, UKRAINE C045137

Contract No.: 50005  
 TECHN.PROTOCOL № 210-11 SPEC.№2798/P024122-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:2 Sheet: 1  
**QUALITY CERTIFICATE** EN10204/3.1 Nr.252634  
 PLANT ORDER № 8014902798

 **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=3.40-5.50m/11.15-18.03ft  
**Grade:** 316/F316/316L/F316L

QUANTITY:  
 (number of pcs) 1bund Q-1587 lb/720 kg

Delivery condition  
 solution annealed :1900-2010<sup>o</sup>F(1040-1100<sup>o</sup>C)/water  
 термообработка:закалка в воду

QMS Certified

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		
<b>CAST</b> № 96481	.022	.78	1.36	.034	.023	16.68 ✓	10.10 ✓	2.07 ✓	.077	.24	.05	.09	.11	.11	.012	.033		

ASTM A370-08a

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	39.7(273)	83.6(574)	60	75	167	233

**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 tested in state of delivery

US - testing      yes      Results: SEP 1921,group 3/class Dd - O.K.

Radiation free: mercury free. No Weld or Weld repair.

Manufacturer: PJSC DNIPROSPETSSTAL  
 Date: 20.09.11      Manager of quality assurance department - V. Kapaieva      Signed

Zaporozhyc  
 Made in Ukraine.



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