

95961

CO31327



**DNEPROSPETSSTAL, YUZHNOYE SHOSSE 81, ZAPOROZHYE 69008, UKRAINE**

Contract No.: 50005

TECHN. PROTOCOL № 210-06 SPEC. № 1882/P023364-ED

ASTM A182/A182M-05; ASME SA-182/SA-182M-04; ASTM A276-04;

ASTM A479/A479M-04; ASTM SA-479/SA-479M-04; ASTM A484/A484M-05; AMS QQ-S-763A-03

Cond. A; NACE MR 0175-2003; AMS 5648K-02; AMS 5653F-02; ASTM A193/A193M-04; GR B8M, CL1 (EXC PAR 6.3)

ASME SA-193/SA-193M-04 GR B8M, CL1 (EXC PAR 6.3); NACE MR0103

EN10204/3.1

Sheets: 5

Sheet: 2

QUALITY CERTIFICATE № 243761

PLANT ORDER № 8014901882

CUSTOMER  
„DSS INTERNATIONAL SA“  
Switzerland

**PRODUCT DESCRIPTION**

Bars and rods of corrosion-resistant (stainless) steel hot rolled, peeled on Landgraf line. Прутки из коррозионно-стойких (нержавеющих) сталей горячекатаные обточенные на автом. Ландграф.

STEEL MAKING PROCESS: EAF+AOD

СПОСОБ ВЫПЛАВКИ: Электродуговая печь+AOP

Round 5.250in/133.35 mm L=3.40-5.50m/11.15-18.03ft

Grade: 316/F316/F316L/F316L

QUANTITY: 1bund O-3225 lb/1508 kg  
(number of pcs) 1bund O-3225 lb/1490 kg

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

ANALYSES, %	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		
HEAT № 95961	.022	.30	1.44	.038	.026	16.84	10.10	2.04	.07	.29	.04	.10	.089	.07	.014	.036		

ASTM A370-08a

MECHANICAL PROPERTIES	Yield Strength, Ksi(N/mm <sup>2</sup> ) Re (R <sub>e</sub> )	Tensile Strength, Rm, ksi (N/mm <sup>2</sup> )	Elongation		Reduction of area, Z, %	Brinell Hardness HB	Impact strength, KV, J
			in 2 inches (50mm) or 4D, min, % (ASTM A370)				
REQUIRED	36(248)	75 (515)	45	50	140-223	100	
EFFECTIVE	44.4(305)	82.9(570)	53	75	167	273	

TECHNICAL REQUIREMENTS:

Macrostructure - GOOD  
GRAIN SIZE: 5 to ASTM E 112  
Nonmetallic inclusions - ASTM E 45 (Method A)  
A B C D  
thin thick thin thick thin thick thin thick  
2.5 1.5 2.3 1.0 0 0 1.0 1.0  
ICC-ASTM A262-02a(Method E)-test: O.K.  
„Dimension/surface defects test, anti-mixing test - O.K.“  
Ratio of reduction- 18.67:1

Mechanical properties tested in state of delivery

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

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

Manufacturer: JSC DNEPROSPETSSTAL

Date: 20.02.11 Signed:

V. Kapichova

Zaporozhye  
Made in Ukraine.