

Co# 5343 / 1572 C241976

**PrJSC DNIPROSPETSSTAL, YUZHNOYE SHOSSE 81, 69008 ZAPOROZHYE, UKRAINE**

Contract No.: 20002  
 TECHN.PROTOCOL № 390-11 SPEC.№ 2425/PO45729  
 DIN EN 10088-3-05, DIN EN 10272-08, AD2000-Merkblatt W2; AD 2000-Merkblatt W10; 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-10GR B8M, CL1 (EXC PAR 7.2); ASME SA-193/SA-193M-10 GR B8, CL 1 (EXC PAR 7.3); **NACE MR 0175-03**; NACE MR 0103-10

Sheets: 4 Sheet: 1  
**INSPECTION CERTIFICATE EN10204/3.1** Nr. 344841  
 PLANT ORDER № 8014902425



**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 3.750in/95.25 mm L=5.580/18.295ft L=5.570m/18.262ft  
**Grade: 316/316L/1.4401/1.4404**

**QUANTITY:** 1bund Q-3558 lb/1614 kg  
 (number of pcs) 1bund Q-3558 lb/1614 kg

Delivery condition  
 solution annealed : 1900° F(1040°C) water 30minutes  
 термообработка: закалка в воду

ANALYSIS, %	C	Si	Mn	P	S	Cr	Ni	Mo	Al	Cu	V	W	Ti	Co	Nb	N	Sn	B
REQUIRED	<.030	<1,00	1.20-2.00	<.040	.015-.030	16.50-18.00	10.00-13.00	2.00-2.50	<.10	<.40	<.10	<.20	<.15	<.40	<.20	<.10		
CAST № A07147	.022	.44	1.33	.035	.027	17.00	10.40	2.07	.073	.25	.04	.06	.01	.08	.01	.034	.0082	.0024

DIN EN 10002-1, ASTM A370-09

MECHANICAL PROPERTIES	Yield Strength, (N/mm <sup>2</sup> ) R0.2% R 1.0%		Tensile Strength, Rm, (N/mm <sup>2</sup> )	Elongation		Reduction of area, Z % L	Brinell Hardness HB	Impact strength, KV, J	
	A5 % L	Q		In 2 inches (50mm) or 4D, min, % L	L			L	Q
REQUIRED	205	240	515-690	40 -	40	50	140-217	100	-
EFFECTIVE	293 290	332 331	565 566	61 - 61 -	61 60	79 79	167 167	207 207 207 204 204 204	-

**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 1.5 1.5 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  
 We acknowledge that the delivered products conform to the requirements of the order  
 Ratio of reduction-35.1:1

Mechanical properties tested in state of delivery

US - testing yes Results: ASTM A388/A388M-FBH1/8"; EN 10308 type 1a; class 3:OK

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

Manufacturer: PrJSC DNIPROSPETSSTAL  
 Date: 25.04.19 **Manager of quality assurance department** - V. Kapaieva  
 Signed:   
 Zaporozhye  
 Made in Ukraine.

ANS