

74 pcs  
C297136

**PJSC DNIPROSPETSTAL, YUZHNOYE SHOSSE 81, 69008 ZAPOROZHYE, UKRAINE**



Contract No.: 20002  
 TECHN. PROTOCOL № 390-11 SPEC. №2327/POS1076  
 DIN EN 10088-3-05, DIN EN 10272-08, DIN EN 10222-5-00, AID 2000-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 5648R-07, AMS 5653E-07, ASTM A193/A193M-10, GR B8M, CL1, ASME SA-193/SA-193M-10, GR B8, CL 1, ASTM A320, A320M-08, GR B8M, CL 1, ASME SA-320/SA-320M-10, GR B8, CL1, NACE MR 0175-03, NACE MR 0103-10

Sheets: 3  
 Sheet: 3  
 INSPECTION CERTIFICATE EN10204/3.1 Nr. 370362  
 PLANT ORDER № 8014907327



**CUSTOMER**  
**DSS INTERNATIONAL**  
 SA Switzerland

**PRODUCT DESCRIPTION**  
 Bars and rods of corrosion-resistant (stainless) steel forged, peeled, Прутки из коррозійно стійких (непіддатливих) сталей ковані, обточені.  
**STEEL MAKING PROCESS: EAF+AOD**  
**ЧІОСОБ ВПЛИВАННЯ:** Електроплавочна переп. АКР  
 Round 9.000mm/228.60 mm L=14.852 ft/4.530m L=13.131 ft/4.005m  
 Grade: 316/316L/1.4401/1.4404

**QUANTITY:**  
 (number of pcs) 1bund Q-3377 1b/1532 kg  
 1bund Q-2998 1b/1360 kg  
**Delivery condition**  
 solution annealed : 2012 ° F(1100° C) water 25 minutes  
 термоброботка: закатка 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 № A09930	.020	.44	1.51	.040	.030	16.91	10.23	2.08	.073	.33	.08	.07	.005	.14	.01	.031	.00889	.0023

DIN EN 10002-1, ASTM A370-09

MECHANICAL PROPERTIES	Yield Strength, (N / mm <sup>2</sup> ) R <sub>0.2%</sub> R 1.0%	Tensile Strength, (N / mm <sup>2</sup> ) R <sub>m</sub>	Elongation		Reduction of area, Z % L	Brinell Hardness HR	Impact strength, KV, J L		Q
			A <sub>5</sub> % L, Q	In 2 inches (50mm) or 4D, min, % L			203 201 202 64 64 64	203 201 203 61 61 61	
REQUIRED	205	515-690	45-35	40	50	140-217	100	60	
EFFECTIVE	303 300	346 566	60-52 60-52	58 58	77 77	163 163	212 212 212 203 201 203	64 64 64 61 61 61	

Mechanical properties tested in state of delivery

US - testing      yes      Results: ASTM A388/A388M-FB11/8" EN 10228-4 type 1a, class 3-OK

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

**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 2.0 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/Підтверджуємо, що поставлені продукція відповідає/єт потребам заказа  
 Ratio of reduction-7.9:1  
 Date: 31.05.2012 Manager of quality assurance department  
 - V. Karpava      Signed

Zaporozhye  
 MELTED and Produced in Ukraine  
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*(Signature)*

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