

C171237

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

	Contract No.: 20002 TECHN.PROTOCOL № 390-11 SPEC.№ 1367/P038337 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: 2                      Sheet: 1 INSPECTION CERTIFICATE EN10204/3.1 Nr.311181 PLANT ORDER № 8014901367
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	CUSTOMER <b>DSS INTERNATIONAL</b> SA Switzerland	<b>PRODUCT DESCRIPTION</b> Bars and rods of corrosion-resistant (stainless) steel hot rolled, peeled on Landgraf line. Прутки из коррозионностойких (нержавеющих) сталей горячекатаные, обточенные на линии Ландграф. <b>STEEL MAKING PROCESS: EAF+AOD</b> <b>СПОСОБ ВЫПЛАВКИ: Электродуговая печь+АКР</b> Round 4.000in/101.60 mm L=4.010m/13.148ft L=3.360m/11.016ft <b>Grade: 316/316L/1.4401/1.4404</b>	QUANTITY: (number of pcs)	1bund Q-2284lb/1036 kg 1bund Q-979 lb/444 kg
QMS Certified			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 № A03550	.019	.56	1.29	.036	.024	16,95	10.36	2.07	.072	.29	.06	.04	.006	.17	.01	.028	.0087	.0012

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	
	L	Q		A, % L Q	In 2 inches (50mm) or 4D, min, % L			L	Q
REQUIRED	205	240	515-700	40 -	40	50	140-217	100	
EFFECTIVE	289 293	302 306	560 562	61 - 60 -	59 58	75 77	167 167	242 242 242 240 240 240	

**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
2.5	2.0	2.0	1.0
0.0	0.0	0.0	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

Mechanical properties tested in state of delivery

US - testing	yes	Results: ASME SA-388/SA-388M-10 (ASTM A 388/A 388M-09)-FBH1/8"; EN 10308 type 1a; class 3; OK
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Radiation free; mercury free. No Weld or Weld repair.

Manufacturer: PJSC DNIPROSPETSSTAL  
 Date: 25.08.16      Manager of quality assurance department - V. Kapaieva  
 Signed:   
 Zaporozhye  
 Made in Ukraine.