

98369

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



Contract No.: 50005  
 TECHN.PROTOCOL № 390-11 SPEC.№7839/P021368-TO  
 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 5639H-07; AMS 5647H-07; ASTM A193/A193M-10GR B8,CL1; ASME SA-193/SA-193M-10 GR B8,CL 1; ASTM A320/A320M-08 GR B8,CL 1; ASME SA-320/SA-320M-10 GR B8,CL1; NACE MR 0175-03; NACE MR 0103-10

Sheets: 7 Sheet: 3  
 QUALITY CERTIFICATE EN10204/3.1 Nr.266998  
 PLANT ORDER № 8014907839



**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 7.000in/177.80 mm L=5.130m/16.820ft ; L=5.220m/17.115ft  
**Grade: 304/304L/1.4301/1.4307**

**QUANTITY:** 1bund Q-2297 lb/1042 kg  
 (number of pcs) 1bund Q-2337 lb/1060 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 <sub>2</sub>	Sn	B
REQUIRED	<.030	<1.00	1.20-2.00	<.040	.015-.030	18.00-19.50	8.00-10.00	<.30	<.10	<.40	<.10	<.20	<.15	<.40	<.20	<.10		
CAST № 98369	.024	.69	1.70	.038	.026	18,64	8.32	.28	.072	.22	.07	.14	.009	.05	.015	.070	.0078	.0010

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	
				A <sub>5</sub> % L Q	In 2 inches (50mm) or 4D, min, % L			L	Q
REQUIRED	205	230	515-700	45 35	40	50	140-223	100	60
EFFECTIVE	293 279	327 313	553 550	60 54 60 55	59 58	79 79	163 163	290 293 290 292 290 285	64 64 64 64 65 64

**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	1.5	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

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

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

Manufacturer: PJSC DNIPROSPETSSTAL  
 Date: 29.10.12 Manager of quality assurance department - V. Kapaieva  
 Signed:

Zaporozhye  
 Made in Ukraine.

*[Signature]*  
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