

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

**96915**



Contract No.: 50005  
 TECHN.PROTOCOL № 390-11 SPEC.№3756/P012924-TO  
 DIN EN 10088-3-05, DIN EN 10272-08; DIN EN 10222-5-00; AD 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 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: 8 Sheet: 2  
 QUALITY CERTIFICATE EN10204/3.1 Nr.253359  
 PLANT ORDER № 8014903756



GMS Certified

**CUSTOMER**  
 DSS INTERNATIONAL  
 SA Switzerland

**PRODUCT DESCRIPTION**

Bars and rods of corrosion-resistant (stainless) steel forged, peeled. Прутки из коррозионностойких (нержавеющих) сталей кованные, обточенные.

**STEEL MAKING PROCESS: EAF+AOD**

**СПОСОБ ВЫПЛАВКИ: Электродуговая печь+АКР**

Round 8.500in/215.90 mm L=3.710m/12.164ft L=4.180m/13.705ft L=3.820m/12.525ft

Grade: 304/304L/1.4301/1.4307

**QUANTITY:**  
 (number of pcs) 1bund Q-2482 lb/1126 kg  
 1bund Q-2791 lb/1266 kg  
 1bund Q-2553 lb/1158 kg

**Delivery condition**  
 solution annealed :1900<sup>o</sup>F(1040<sup>o</sup>C)water 15minutes  
 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 № 96915	.020	.26	1.60	.035	.021	18,53	8.12	.25	.081	.25	.05	.08	.006	.08	.01	.073	.009	.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>s</sub> % l. O	In 2 inches (50mm) or 4D, min, % L		L	Q				
REQUIRED	205	230	515-700	45 35	40	50	140-223	100	60
EFFECTIVE	299 304	343 348	596 600	58 54 59 52	49 48	73 75	174 174	200 200 210 205 200 208	92 93 104 87 90 90

**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 2.0 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)-F1111/8"; EN 10228-4 type 1; class 3; OK

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

Manufacturer: PJSC DNIPROSPETSSTAL  
 Date: 05.10.11 Manager of quality assurance department - V. Kapaie  
 Signed:



Zaporozh'ye  
 Made in Ukraine.