

# A00386 - 15.0in

C.104039

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



Contract No.: 20002  
 TECHN.PROTOCOL № 390-11 SPEC №2647/P032284-BD  
 DIN EN 10088-3-05, DIN EN 10272-08, DIN EN 10222-5-00, 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-10 GR. B8, CL.1; 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, CL.1; NACE MR 0175-03; NACE MR D103-10

Sheets: 4  
**QUALITY CERTIFICATE EN10204/3.1 Nr.281498**  
 PLANT ORDER № 8014902647



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

**PRODUCT DESCRIPTION**  
 Bars and rods of corrosion-resistant (stainless) steel forged, peeled. *Листы из коррозионноустойчивых (нержавеющих) сталей кованые, обточенные.*  
**STEEL MAKING PROCESS: EAF+AOD**  
**СПОСОБ ВЫПУСКА:** Электродуговая печь+АКР  
 Round 15.000in/381.00 mm L=4.420m/14.492ft  
 Grds: 316/316L/1.4491/1.4404

**QUANTITY:**  
 (number of pcs) 1bund Q-9070 lb/4114 kg

**Delivery condition**  
 solution annealed :1922°F(1050°C) water 34minutes  
 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
<b>REQUIRED</b>	<.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		
<b>CAST № A00386</b>	.020	.46	1.32	.037	.027	16.88	10.20	2.08	.072	.26	.05	.10	.005	.08	.011	.036	.013	.001

**DIN EN 10002-LASTM A370-09**

MECHANICAL PROPERTIES	Yield Strength, (N/mm <sup>2</sup> ) min & R 10%		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	In 2 inches (50mm) or 4D, min, % L			L	Q	
<b>REQUIRED</b>	205	240	515-690	45	35	40	50	140-223	100	60
<b>EFFECTIVE</b>	278 280	286 291	564 568	59	54	57	75	167	208 208 206 203 203 200	62 62 62 61 61 61

**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
3.0	2.0	3.0	2.0	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)-FBH/5°; EN 10228-4 type 1; class 3:OK

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

Manufacturer: PJSC DNIPROSPETSSTAL  
 Date: 28.02.14      Manager of quality assurance department - V. Kapaieva  
 Signed:   
 Zaporozhye  
 Made in Ukraine.