

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



Contract No.: 20002  
 TECHN.PROTOCOL № 390-11 SPEC.№ 9728/PO44311  
 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 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:7** **Sheet: 4**  
**INSPECTION CERTIFICATE EN10204/3.1 Nr.335735**  
**PLANT ORDER № 8014909728**



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

**PRODUCT DESCRIPTION**  
 Bars and rods of corrosion-resistant (stainless) steel forged, peeled. Прутки из коррозионноустойчивых (нержавеющих) сталей кованные, обточенные.  
**STEEL MAKING PROCESS: EAF+AOD**  
**СПОСОБ ВЫПЛАВКИ: Электродуговая печь+АКР**  
 Round 13.000in/330.20 mm L=11.016 ft/3.36 m  
**Grade: 316/316L/1.4401/1.4404**

**QUANTITY: 1bund Q-5194 lb/2356 kg**  
 (number of pcs)

Delivery condition  
 solution annealed :1940°F(1060°C)water 30minutes  
 термообработка:закалка в воду

QMS Certified

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 № A06147	.017	.41	1.36	.040	.025	16,85	10.20	2.05	.067	.36	.06	.08	.005	.13	.013	.025	.0129	.0025

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		As %	In 2 inches (50mm) or 4D,min,% L			L	Q
REQUIRED	205	240	515-690	45 35	40	50	140-217	100	60
EFFECTIVE	286	305	590	61 55	58	75	174	184 184 184	67 67 67

**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
3.0	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/Подтверждаем, что поставленная продукция соответствует требованиям заказа  
 Ratio of reduction-5.9:1

Mechanical properties tested in state of delivery

US - testing      yes      Results: ASTM A388/A388M-FBH1/5"; EN 10228-4 type 1a; class 3:OK

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

Manufacturer: PrJSC DNIPROSPETSSTAL  
 Date: 10.07.18      **Manager of quality assurance department - V. Kapaieva**  
 Signed:   
 Zaporozhye  
 Made in Ukraine.

P.O. # 5581      Part # 10-FOE-40

Description: 10" CPA 50E S-40 316 S/S

ANS