

HT # A06221

SW # 19714

C-220972

**Pr.JSC DNIPROSPETSSTAL, YUZHINOYE SHOSSE 81, 69008 ZAPOROZHJE, UKRAINE**

Contract No. 20002  
 TECHN. PROTOCOL № 390-11 SPEC. № 9728 P044311  
 DIN EN 10088-3-05 DIN EN 10272-08 AD 2006-Merkblatt W2 AD 2006-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 ASME SA-484/SA-484M-10 ASTM A564/A564M-10 ASME SA-564/SA-564M-10 ASTM A193/A193M-10 ASME SA-193/SA-193M-10 ASTM A320/A320M-08 GR B8MCT 1 ASME SA-320/SA-320M-10 GR B8CLINACT MR 0175-03 NACT MR 0103-10



**Sheets: 8**      **Sheet: 1**  
**INSPECTION CERTIFICATE EN10204.3.1 Nr. 336112**  
**PLANT ORDER № 8011909728**

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

**PRODUCT DESCRIPTION**  
 Bars and rods of corrosion-resistant (stainless) steel hot rolled, peeled on 1 and/or 2 ends. Ispytin iz korrupciynozhnykh (nepokazhnykh) stalnykh proutkamyh.  
**STEEL MAKING PROCESS: EAF+AOD**  
**CHOC OB BИHЛABKTE** Дискрипцiя товару за АЕП  
 Round 5.25mm 133.35 mm L=18.3610/5.60mm L=18.3381/5.60mm  
**Grade: 316/316L/1.4401/1.4404**



**QUANTITY:**  
 (number of pcs)      **1 bund Q-1411 1b/640 kg**  
**1 bund Q-215 1b/1912 kg**

Delivery condition  
 solution annealed : 1900° F (1040° C) water 30minutes  
 (розпечення розчином у воді)

ANALYSIS, %	C	Si	Mn	P	S	Cr	Ni	Mo	Al	Cu	V	W	Ti	Co	Nb	N	Sn	B
REQUIRED	<0.03	<1.00	1.20-2.00	<0.04	.015-0.030	16.50-18.00	10.00-13.00	2.00-2.50	<1.0	<.40	<.10	<.20	<.15	<.40	<.20	<.10		
CAST № A06221	.018	.38	1.35	.040	.024	16.77	10.20	2.07	0.68	.32	.05	.06	.068	.13	.01	.026	.011	0.024

DIN EN 10002-1, ASTM A376-09

MECHANICAL PROPERTIES	Yield Strength, (ksi/mm <sup>2</sup> )	Tensile Strength, (ksi/mm <sup>2</sup> )	Elongation		Reduction of area, Z %	Impact strength, KJ, J
			A, %	In 2 inches (50mm) or 4D min %		
REQUIRED	205	515-630	40	40	50	100
EFFECTIVE	273 275	568 569	60 60	60 59	77 77	204 201

**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  
 2.0 2.0 2.0 1.0 0.0 0.0 1.0 1.0  
 ICC-ASTM A262-08 (practice F)-test: O.K.  
 Dimension surface defects test, anti-mixing test - OK  
 We acknowledge that the delivered products conform to the requirements of the order  
 Ratio of reduction-20.8.1

**US - testing**      **yes**      **Results: ASTM A388 A388M-F BHU 8" FN 10408 type 1 class 3 OK**

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

Manufacturer: Pr.JSC DNIPROSPETSSTAL  
 Date: 23.07.18      **Manager of quality assurance department - V. Kapaieva**  
 Signed: *[Signature]*  
 Zaporozhye  
 Made in Ukraine

Feb 21/19

