



C244190

PrJSC DNIPROSPETSSTAL, YUZHNOYE SHOSSE 81, 69008 ZAPOROZHYE, UKRAINE

	<p>Contract No.: 20002 TECHN.PROTOCOL № 390-11 SPEC.№ 2426/PO45858 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 5648K-07; AMS 5653F-07; ASTM A193/A193M-10GR B8M, CL1 (EXC PAR 7.2); ASME SA-193/SA-193M-10 GR B8, CL 1 (EXC PAR 7.3); NACE MR 0175-03; NACE MR 0103-10</p>	<p>INSPECTION CERTIFICATE EN10204/3.1 Nr. 345221 PLANT ORDER № 8014902426</p>
 QMS Certified	<p>CUSTOMER DSS INTERNATIONAL SA Switzerland</p> <p>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 5.000in/127.00 mm L=5.620/18.426ft L=5.610m/18.393ft Grade: 316/316L/1.4401/1.4404</p>	<p>QUANTITY: 1bund Q-3849 lb/1746 kg (number of pcs) 1bund Q-2557 lb/1160 kg</p> <p>Delivery condition solution annealed : 1900⁰ F(1040⁰ C) water 30minutes термообработка: закалка в воду</p>

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 № A07203	.022	.41	1.58	.036	.024	16.93	10.38	2.07	.07	.26	.06	.05	.005	.14	.011	.030	.0093	.0024


DIN EN 10002-1, ASTM A370-09

MECHANICAL PROPERTIES	Yield Strength, (N/mm ²) R0.2% R 1.0%		Tensile Strength, Rm, (N/mm ²)	Elongation		Reduction of area, Z, % L	Brinell Hardness HB	Impact strength, KV, J	
	L	Q		A, % L Q	In 2 inches (50mm) or 4D, min, % L			L	Q
REQUIRED	205	240	515-700	40 -	40	50	140-217	100	-
EFFECTIVE	280 285	302 307	580 585	61 - 61 -	58 59	76 78	170 170	194 194 194 201 201 201	-

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 thin thick
 3.0 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
 We acknowledge that the delivered products conform to the requirements of the order
 Ratio of reduction-24.0:1

Mechanical properties tested in state of delivery

US - testing	yes	Results: ASTM A388/A388M-FBH1/8"; EN 10308 type 1a; class 3:OK
--------------	-----	--

Manufacturer: PrJSC DNIPROSPETSSTAL
 Date: 10.05.19 **Manager of quality assurance department - V. Kapaieva**
 Signed: 
 Zaporozhye
 Made in Ukraine.

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

ANS