

HT# A05049

C194475

PrJSC DNIPROSPETSSTAL, YUZHNOYE SHOSSE 81, 69008 ZAPOROZHYE, UKRAINE

Contract No.: 20002
 TECHN.PROTOCOL № 390-11 SPEC.№5950/P041671
 DIN EN 10088-3-05, DIN EN 10272-08, AD2000-Merkblatt W10; 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; 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:3 Sheet: 3
INSPECTION CERTIFICATE EN10204/3.1 Nr.324642
 PLANT ORDER № 8014905950



CUSTOMER
DSS INTERNATIONAL
 SA Switzerland

PRODUCT DESCRIPTION
 Bars and rods of corrosion-resistant (stainless) steel hot rolled, peeled on Landgraf line. Прутки из коррозионностойких (пержавеющих) сталей горячекатаные, обточенные на линии Ландграф.
STEEL MAKING PROCESS: EAF+AOD
СПОСОБ ВЫПЛАВКИ: Электродуговая печь+AOP
 Round 3.750in/95.25 mm L=3.670m/12.033ft L=5.610m/18.393ft
 L=5.620m/18.426ft
Grade: 316/316L/1.4401/1.4404

QUANTITY:
 (number of pcs) **1bund Q-476 lb/216 kg**
1bund Q-3593 lb/1630 kg
1bund Q-2160 lb/980 kg

Delivery condition
 solution annealed :1900°F(1040°C)water 30minutes
 термообработка:закалка в воду

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 № A05049	.020	.47	1.31	.036	.024	16.88	10.35	2.11	.079	.23	.06	.13	.005	.10	.014	.025	.008	.0022

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 ₅ , % L	In 2 inches (50mm) or 4D, min, % L			L	Q
REQUIRED	205	240	515-690	40 -	40	50	140-217	100	-
EFFECTIVE	302 303	336 337	558 561	60 - 60 -	59 59	79 79	163 163	211 211 211 208 208 208	-

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
2.5	2.0	2.5	2.0
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

Mechanical properties tested in state of delivery

US - testing yes Results: ASME SA-388/SA-388M-10(ASTM A 388/A 388M-09)-FBH1/8"; EN 10308 type Ia; class 3:OK

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

Manufacturer: PrJSC DNIPROSPETSSTAL
 Date: 05.09.17 **Manager of quality assurance department - V. Kapaieva**
 Signed:
 Zaporozhye
 Made in Ukraine.

Feb 15 / 18