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PJSC DNIPROSPETSSTAL, YUZHNOYE SHOSSE 81, 69008 ZAPOROZHYE, UKRAINE



Contract No.: 20002
 TECHN.PROTOCOL № 390-11 SPEC.№2840/PO39347
 DIN EN 10088-3-05, DIN EN 10272-08, DIN EN 10222-5-00, 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; 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: 4 Sheet: 4
 INSPECTION CERTIFICATE EN10204/3.1 Nr.313422
 PLANT ORDER № 8014902840



CUSTOMER
 DSS INTERNATIONAL
 SA Switzerland

PRODUCT DESCRIPTION
 Bars and rods of corrosion-resistant (stainless) steel forged, peeled. Прутки из коррозионностойких (нержавеющих) сталей кованы, обточенные.
 STEEL MAKING PROCESS: EAF+AOD
 СПОСОБ ВЫПЛАВКИ: Электродуговая печь+АКР
 Round 11.000in/279.40 mm L=12.984ft/3.960m L=13.246ft/4.040m
 Grade: 316/316L/1.4401/1.4404

QUANTITY: 1bund Q-4383 lb/1988 kg
 (number of pcs) 1bund Q-4475 lb/2030 kg

Delivery condition
 solution annealed :1922°F(1050°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 № A03916	.018	.38	1.31	.039	.025	17,17	10.26	2.07	.081	.28	.05	.07	.005	.08	.01	.028	.011	.001

DIN EN 10002-1, ASTM A370-09

MECHANICAL PROPERTIES	Yield Strength, (N/mm ²) R0.2% R1.0%		Tensile Strength, Rm, (N/mm ²)	Elongation		Reduction of area, Z % L	Brinell Hardness HB	Impact strength, KV, J	
	L	Q		A5 % L	In 2 inches (50mm) or 4D, min, % L			L	Q
REQUIRED	205	240	515-690	45 35	40	50	140-223	100	60
EFFECTIVE	263 265	303 305	561 566	59 45 59 45	58 58	79 79	167 167	195 195 195 191 191 191	90 90 90 88 88 88

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	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/Подтверждаем, что поставленная продукция соответствует требованиям заказа

Mechanical properties tested in state of delivery

US - testing yes Results: ASME SA-388/SA-388M-10(ASTM A 388/A 388M-09)-FBH1/5"; EN 10228-4 type 1a; class 3:OK

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

Manufacturer: PJSC DNIPROSPETSSTAL
 Date: 27.10.16 Manager of quality assurance department - V. Kapaieva
 Signed:
 Zaporozhye
 Made in Ukraine.