

C/114286

PJSC DNIPROSPETSSTAL, YUZHNOYE SHOSSE 81, 69008 ZAPOROZHYE, UKRAINE

Contract No.: 20002
 TECHN. PROTOCOL № 390-11 SPEC. № 3998/P033237-ED
 DIN EN 10088-3-05, DIN EN 10272-08, DIN EN 10222-5-00, AD2000-Merkblatt WZ; AD 2000-Merkblatt W10-ASTM
 A182/A182M-10; ASME 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: 8
 INSPECTION CERTIFICATE EN10204/3.1 Nr. 286833
 PLANT ORDER № 8014903998

CUSTOMER
 DSS INTERNATIONAL
 SA Switzerland

PRODUCT DESCRIPTION
 Bars and rods of corrosion-resistant (stainless) steel forged, peeled. Прутка из коррозионностойких (нержавеющих) сталей кованные, обточенные.
STEEL MAKING PROCESS: EAF+AOD
СПОСОБ ВЫПУСКА: Электроплавочная печь+AKP
 Round 8.000in/203.20 mm L=5.0650m/16.590ft L=4.720m/15.475ft
 Grade: 316/316L/1.4401/1.4404

QUANTITY:
 1bund Q-2994 lb/1358 kg
 1bund Q-2791 lb/1266 kg

Delivery condition
 solution annealed :1976° F(1080° C) water 20minutes
 термообработка: закалка в воду

ANALYSIS, %	C	Si	Mn	P	S	Cr	Ni	Mo	Al	Cu	V	W	Ti	Co	Nb	N ₂	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 № A01049	.020	.44	1.32	.034	.025	17.13	10.40	2.07	.064	.22	.05	.09	.011	.07	.01	.030	.010	.001

DIN EN 10002-1, ASTM A370-09

MECHANICAL PROPERTIES	Yield Strength, (N/mm ²) RE% K 1.0%	Tensile Strength, Rm, (N/mm ²)	Elongation		Reducti on of area, Z %	Brinell Hardness HB	Impact strength, KV, J	
			A ₅ %	in 2 inches (50mm) or 4D, min. %			L	Q
REQUIRED	205	515-690	45	35	40	50	100	60
EFFECTIVE	291 287	551 548	60	53	59	81	289 277	64 63 63 65

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
 2.5 2.0 1.5 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

Mechanical properties tested in state of delivery

Results: ASME SA-388/SA-388M-10(ASTM A 388/A 388M-09)-FBH1/8"; EN 10228-4 type 1a, class 3-OK

Manufacturer: PJSC DNIPROSPETSSTAL
 Date: 06.08.14
 Manager of quality assurance department - V. Kapateva
 Signed:

Zaporozhye
 Made in Ukraine.

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