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PJSC DNIPROSPETSSTAL, YUZHNOYE SHOSSE 81, 69008 ZAPOROZHYE, UKRAINE



Contract No.: 20002
 TECHN. PROTOCOL № 390-11 SPEC. №5037/P034083-ED
 DIN EN 10088-3-05, DIN EN 10272-08, DIN EN 10222-5-00, ASTM A 182/A 182M-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-10, GR B8, CL 1; 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, CL 1; NACE MR 0175-03; NACE MR 0103-10

CUSTOMER
DSS INTERNATIONAL
SA Switzerland



GMS Certified

PRODUCT DESCRIPTION
 Bars and rods of corrosion-resistant (stainless) steel forged, peeled, Прутки из коррозионноустойчивых (нержавеющих) сталей кованые, обработанные.
STEEL MAKING PROCESS: EAF+AD
ПРОЦЕСС ВЫПУСКА: Электроплавка печи+АКР
 Round 13.000in/330.20 mm L=3.030m/9.934ft L=2.870m/9.410ft
 Grade: 316/316L/1.4401/1.4404

Sheets: 7 Sheet: 5
 INSPECTION CERTIFICATE EN10204/3.1 Nr. 288687
 PLANT ORDER № 8014905037
 QUANTITY: 1bund Q-4683 1b/2124 kg
 (number of pcs) 1bund Q-4440 1b/2014 kg
 Delivery condition
 solution annealed :1940° F(1060° C)water 30minutes
 термодобработка: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 № A01299	.022	.50	1.39	.035	.021	17.23	10.20	2.10	.066	.27	.06	.15	.005	.12	.012	.030	.0101	.0011

DIN EN 10002-1, ASTM A370-09

MECHANICAL PROPERTIES	Yield Strength, (N/mm ²) R02% R 1.0%	Tensile Strength, (N/mm ²) Rm	Elongation		Reduction of area, Z% L	Brinell Hardness HB	Impact strength, KV, J	
			A5% L, Q	In 2 inches (50mm) or 4D, min, % L			L	Q
REQUIRED	205	240	45-35	40	50	140-223	100	60
EFFECTIVE	290	310	590	61-54	58	174	218-227-210	62-62-63

Mechanical properties tested in state of delivery

U/S - testing yes Results: ASME SA-388/SA-388M-10/ASTM A 388/A 388M-09) FBH1/5"; EN 10228-4 type I; class 3; OK

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

TECHNICAL REQUIREMENTS:
 Macrostructure - GOOD
 GRAIN SIZE : 5 to ASTM E 112-96(2004)
 Nonmetallic inclusions ASTM E 45-05 (Method A)
 A thin thick thin thick thin thick thin thick
 B 2.5 2.0 2.5 2.0 0.0 0.0 1.0 1.0
 C
 D
 ICC-ASTM A262-08 (practice E)-test: O.K.
 Dimension/surface defects test, anti-mixing test - OK

Manufacturer: PJSC DNIPROSPETSSTAL
 Date: 30.09.14 Manager of quality assurance department - V. Kapateva
 Signed:

Zaporozhye
 Made in Ukraine.