

C023576

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DNEPROSPETSSTAL, YUZHNOYE SHOSSE 81, ZAPOROZHYE 69008, UKRAINE

Contract No.: 50005 EN10204/3.1

TECHN. PROTOCOL № 210-06 SPEC. № 0431/PO21944
 ASTM A182/A182M-05; ASME SA-182/SA-182M-04; ASTM A276-04;
 ASTM A479/A479M-04; ASTM SA-479/SA-479M-04; ASTM A484/A484M-05; AMS-QQ-S-763A-03
 Cond. A; NACE MR 0175-2003; AMS 5648K-02; AMS 5653F-02; ASTM A193/A193M-04c GR B8M, CL1 (EXC PAR 6.3)
 ASME SA-193/SA-193M-04 GR B8M, CL1 (EXC PAR 6.3);

Sheets: 8 Sheet: 2
QUALITY CERTIFICATE №. 239780
 PLANT ORDER № 8014900431

CUSTOMER „DSS INTERNATIONAL SA“ Switzerland	PRODUCT DESCRIPTION Bars and rods of corrosion-resistant (stainless) steel hot rolled, peeled on Landgraf line. Прутки из коррозионно-стойких (пержажеоных) сталей горячекатаные обточенные на линии Ландграф.	QUANTITY: 1bund Q-4361 lb/1978kg (number of pcs) 1bund Q-1177 lb/534 kg
	STEEL MAKING PROCESS: EAF+AOD СПОСОБ ВЫПЛАВКИ: Электродуговая печь - АКР Round 5.250in/133.35 mm L=3.40-5.50m/11.15-18.03ft Grade: 316/F316/316L/F316L	Delivery condition solution annealed: 1900-2010° F (1040-1100° C)/water термообработка: закалка в воду

ANALYSES, %	C	Si	Mn	P	S	Cr	Ni	Mo	Al	Cu	V	W	Ti	Co	Nb	N ₂
REQUIRED	<.030	<1.00	1.25-2.00	<.040	.020-.030	16.00-18.00	10.00-14.00	2.00-3.00	<.10	<.40	<.10	<.20	<.15	<.40	<.20	<.10
HEAT № 95432	.028	.36	1.47	.035	.028	16.84	10.20	2.02	.073	.20	.04	.15	.096	.08	.011	.025

MECHANICAL PROPERTIES „ASTM A370-08a“	Yield Strength, Ksi(MPA)	Tensile Strength, Rm,ksi (N/mm ²)	Elongation in 2 inches (50mm) or 40, min, % (ASTM A370)	Reduction of area, %	Brinell Hardness HB	Impact strength, KV, J
REQUIRED	36(248)	75 (515)	45	50	140-223	100
EFFECTIVE	41.9(288)	82.8(569)	59	80	167	207

TECHNICAL REQUIREMENTS:
 Macrostructure - GOOD
 GRAIN SIZE: 6 to ASTM E 112
 Nonmetallic inclusions ASTM E 45 (Method A)

A	B	C	D
thin	thick	thin	thick
2.5	2.0	1.8	1.0
0.0	0.0	1.0	1.0

 ICC-ASTM A262-02a(Method E)-test: O.K.
 „Dimension/surface defects test, anti-mixing test - O.K.“
 Ratio of reduction- 21.6:1

Mechanical properties tested in state of delivery

US - testing yes Results: SEP 1921. 3/ Dd - O.K.

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

Manufacturer: JSC DNEPROSPETSSTAL
 Date: 09.11.10 Signed: *V. Kapaieva*
 V. Kapaieva
 Zaporozhye
 Made in Ukraine.

