98881

C080491

PJSC DNIPROSPETSSTAL, YUZHNOYE SHOSSE 81, 69008 ZAPOROZHYE, UKRAINE

Contract No.: 50005
TECHN.PROTOCOL № 210-11 SPEC.№ 8701/P029042-ED
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-10 GR B8M,CL1 ;ASME SA-193/SA-193M-10GR B8M,CL1;ASTM A320/A320M-08GR B8M,CL 1;ASME SA-320/SA-320M-10 GR B8M,CL 1;NACE MR 0175-03;NACE MR 0103-10

Sheets: 7 **Sheet: 3**
QUALITY CERTIFICATE EN10204/3.1 **Nr.270508**
PLANT ORDER № 8014908701

QMS Certified

CUSTOMER
DSS INTERNATIONAL SA
Switzerland

PRODUCT DESCRIPTION
Bars and rods of corrosion-resistant (stainless) steel hot rolled, peeled on Landgraf line.Прутки из коррозионностойких (нержавеющих) сталей горячекатаные, обточенные на линии «Ландграф».
STEEL MAKING PROCESS: EAF+AOD
СПОСОБ ВЫПЛАВКИ:Электродуговая печь+АКР
Round 6.250in/158.75 mm L=4.83m/15.836ft; L=4.92m/16.131ft; L=4.92m/16.131ft
Grade: 316/F316/316L/F316L

QUANTITY: (number of pcs)
1bund Q-1733 lb/786 kg
1bund Q-1764 lb/800 kg
1bund Q-3457 lb/1568 kg

Delivery condition
solution annealed :1900-2010°F(1040-1100°C)/water, 30'minutes
термообработка:закалка в воду

ANALYSIS, %	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		
CAST № 98881	.017	.31	1.41	.036	.024	17.07	10.30	2.12	.06	.26	.04	.09	.01	.09	.01	.026		

ASTM A370

MECHANICAL PROPERTIES	Yield Strength, Ksi(N/mm²) Re ($R_{0.2}$)	Tensile Strength, Rm,ksi (N /mm²)	Elongation A_5 %	Reduction of area, Z %	Brinell Hardness HB	Impact strength, KV, J
REQUIRED	36(248)	75 (515)	45	50	140-223	100
EFFECTIVE	41.0(282)	82.6(567)	60	75.5	163	282

Mechanical properties tested in state of delivery

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	thin	thick
2.5	2.0	2.0	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

US - testing	yes	Results: «ASTM A 388 FBH 1/8 " »

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

Manufacturer: PJSC DNIPROSPETSSTAL
Date: 03.03.13 **Manager of quality assurance department** - V. Kapaieva Signed:

Zaporozhye
Made in Ukraine.