98053.

C0639145

PJSC DNIPROSPETSSTAL, YUZHNOYE SHOSSE 81, 69008 ZAPOROZHYE, UKRAINE

Contract No.: 50005
TECHN.PROTOCOL № 210-11 SPEC.№ 6687/P027119-ED
ASTM A182/A182M-10;ASME SA-182/SA-182M-10;ASTM A276-10;ASTM A314-08;ASTM A479A479M-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 (EXC PAR 7.2);ASME SA-193/SA-193M-10GR B8M,CL1(EXC PAR 7.3);NACE MR 0175-03;NACE MR 0103-10

Sheets:10 Sheet: 6
QUALITY CERTIFICATE EN10204/3.1 Nr.263429
PLANT ORDER № 8014906687

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 5.250in/133.35 mm L=3.400-5.500m/11.148-18.033ft
Grade: 316/F316/316L/F316L

QUANTITY: 1bund Q-3642 lb/1652 kg
(number of pes) 1bund Q-2354 lb/1068kg

Delivery condition
solution annealed :1900-2010^0 F(1040-1100^{0}C)/water
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 № 98053	.024	.34	1.41	.037	.020	16.77	10.03	2.05	.075	.24	.05	.10	.005	.07	.015	.0380		

MECHANICAL PROPERTIES	Yield Strength, Ksi(N/mm²) Re (R_{e2})	Tensile Strength, Rm,ksi (N /mm²)	Elongation A_5 %	Reduction of area, Z %	Brinell Hardness HB	Impact strength, KV, J
REQUIRED	30(205)	75 (515)	45	50	140-223	100
EFFECTIVE	37.4(257)	81.9(563)	60	79	167	281

Mechanical properties tested in state of delivery

US - testing	yes	Results: SEP 1921,group 3/class Dd - 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		B		C		D	
thin	thick	thin	thick	thin	thick	thin	thick
2.0	1.0	2.0	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

Manufacturer: PJSC DNIPROSPETSSTAL
Date: 27.06.12 **Manager of quality assurance department** - V. Kapaieva Signed:

Zaporozhye
Made in Ukraine.