



063940

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 (BXC 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: 1
QUALITY CERTIFICATE EN10204/3.1 Nr.263429
 PLANT ORDER № 8014906687

 **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 3.25 in/82.55 mm L=3.400-5.500m/11.148-18.033ft
 Grade: **316/F316/316L/F316L**

QUANTITY: 1bund Q-3505 lb/1590 kg
 (number of pcs) 1bund Q-3042 lb/1380kg

Delivery condition
 solution annealed :1900-2010°F(1040-1100°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/mm ²) Re (R _{eL})	Tensile Strength, Rm,ksi (N/mm ²)	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	37.7(259)	81.9(563)	60	79	167	257

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 2.5 2.5 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

US - testing yes Results: SEP 1921,group 3/class Dd - OK

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

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



Zaporozhye
 Made in Ukraine.