98363 (18.75")

C0689 34

PJSC DNIPROSPETSSTAL, YUZHNOYE SHOSSE 81, 69008 ZAPOROZHYE, UKRAINE

Contract No.: 50005
TECHN.PROTOCOL № 210-11 SPEC.№7695/P028087-BD
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 5653P-07;ASTM A193/A193M-10 GR B8M,CL1 ;ASME SA-193/SA-193M-10GR B8M,CL1;ASTM 320/A320M-08GR B8M,CL 1;ASME SA-320/SA-320M-10 GR B8M,CL 1;NACE MR 0175-03;NACE MR 0103-10

Sheets:8 Sheet: 7
QUALITY CERTIFICATE EN10204/3.1 **Nr.265849**
PLANT ORDER № 8014907695

GMS Certified

CUSTOMER
DSS INTERNATIONAL SA
Switzerland

PRODUCT DESCRIPTION
Bars and rods of corrosion-resistant (stainless) steel forged, peeled .Прутки из коррозионностойких (нержавеющих) сталей кованые, обточенные.
STEEL MAKING PROCESS: EAF+AOD
СПОСОБ ВЫПЛАВКИ:Электродуговая печь+АКР
Round 18.750in/476.25 mm L=3.045m/9.984ft
Grade: 316/F316/316L/F316L

QUANTITY:
(number of pcs) **1bund Q-9740 lb/4418 kg**

Delivery condition
solution annealed ;1922°F(1046°C)/water 30 minytes
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 № 98363	.023	.45	1.32	.035	.024	16,79	10.17	2.10	.084	.28	.04	.13	.005	.09	.01	.025		

ASTM A370-08a

MECHANICAL PROPERTIES	Yield Strength, Ksi(N/mm²) Re (R_{n2})	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	36.7(252)	81.4(559)	59	75	163	251

Mechanical properties tested in state of delivery

US - testing	yes	Results: «ASTM A388 FBH 1/5 " »

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
2.5	2.0	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: 20.09.12 **Manager of quality assurance department** - V. Kapaieva Signed:

Zaporozhye
Made in Ukraine.

MAR/26/2013/TUE 09:22 AM CANADIAN SPEC. METAL FAX No. 780 416 4755 P. 005