



97749.(11) CPA-1917

C058667


**PJSC DNIPROSPETSSTAL, YUZHNOYE SHOSSE 81, 69008 ZAPOROZHYE, UKRAINE**

	Contract No.: 50005 TECHN.PROTOCOL № 210-11 SPEC.№ 5867/P026485-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:9 Sheet: 7 <b>QUALITY CERTIFICATE EN10204/3.1 Nr.260934</b> PLANT ORDER № 8014905867
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	<b>CUSTOMER</b> DSS INTERNATIONAL SA Switzerland	<b>PRODUCT DESCRIPTION</b> Bars and rods of corrosion-resistant (stainless) steel forged, peeled Прутки из коррозионностойких (нержавеющих) сталей кованные, обработанные	<b>QUANTITY:</b> 1bund Q-4343 lb/1970 kg (number of pcs) 1bund Q-4101 lb/1860 kg
		<b>STEEL MAKING PROCESS: EAF+AOD</b> СПОСОБ ВЫПЛАВКИ:Электродуговая печь+АКР Round 11.0in/279.40mm L=3.920m/12.852ft; 3.720m/12.197ft Grade: 316/F316/316L/F316L	<b>Delivery condition</b> Solution annealed :1900-2010° F(1040-1100° C)/water/30 minutes термообработка:закалки в воду/30 мин.

ANALYSIS, %	C	Si	Mn	P	S	Cr	Ni	Mo	Al	Cu	V	W	Ti	Co	Nb	N <sub>2</sub>			
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 № 97749	.026	.27	1.37	.036	.025	16,70	10.23	2.06	.056	.26	.04	.10	.094	.08	.011	.0520			

ASTM A370-08a							<b>TECHNICAL REQUIREMENTS:</b> Macrostructure – GOOD GRAIN SIZE : 5 to ASTM E 112-96(2004) Nonmetallic inclusions ASTM B 45-05 (Method A) 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
MECHANICAL PROPERTIES	Yield Strength, Ksi(N/mm <sup>2</sup> ) Re (R <sub>eL</sub> )	Tensile Strength, Rm,ksi (N/mm <sup>2</sup> )	Elongation A <sub>5</sub> %	Reduction of area, Z %	Brinell Hardness HB	Impact strength, KV, J	
REQUIRED	36(248)	75 (515)	45	50	140-223	100	
EFFECTIVE	37.5(258)	82.8(569)	59	75	167	202	

Mechanical properties tested in state of delivery		Results: SEP 1921,group 3/class Cc - OK ASTM.A-388 FBH 1/5inch (5.08 mm)	Manufacturer: PJSC DNIPROSPETSSTAL Date: 19.04.12 Manager of quality assurance department - V. Kapaieva Signed:  Zaporozhye Made in Ukraine.
US - testing	yes		
Radiation free; mercury free. No Weld or Weld repair.			