



C 185733

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

	<p>Contract No.: 20002          TECHN.PROTOCOL № 210-11 SPEC.№ 3963/P04699          ASTM A182/A182M-15; ASME SA-182/SA-182M-13; ASTM A276-15; ASTM A314-15; ASTM A479/A479M-15; ASME SA-479/SA-479M-13; ASTM A484/A484M-15; AMS-QQ-S-763D-15 Cond.A; AMS 5648L-11; AMS 5653H-12; ASTM A193/A193M-15a GR B8M, CL1 (EXC PAR 6.2); ASME SA-193/SA-193M-13 GR B8M, CL1 (EXC PAR 7.3) ANSI/NACE MR 0175/ISO 15156-03-15; NACE MR 0103-12</p>	<p>Sheets: 4      Sheet: 2  <b>INSPECTION CERTIFICATE BN10204/3.1 Nr.317204</b>          PLANT ORDER № 8015203963</p>	
 <p>GMS Certified</p>	<p>CUSTOMER  <b>DSS INTERNATIONAL SA</b>          Switzerland</p>	<p><b>PRODUCT DESCRIPTION</b>          Bars and rods of corrosion-resistant (stainless) steel hot rolled, peeled on Landgraf line. Прутки из коррозионностойких (нержавеющих) сталей горячекатаные, обточенные на линии «Ландграф».  <b>STEEL MAKING PROCESS: EAF+AOD</b>  <b>СПОСОБ ВЫПЛАВКИ: Электродуговая печь+АКР</b>          Round 6.500in/165.10 mm L=12.590ft/3.840m L=12.590ft/3.840m L=12.557ft/3.830m L=12.689ft/3.870m L=12.918ft/3.940m  <b>Grade: 316/F316/316L/F316L.</b></p>	<p>1bund Q-2967 lb/1346 kg 1bund Q-2994 lb/1358 kg  <b>QUANTITY:</b> 1bund Q-2967 lb/1346 kg 1bund Q-1517 lb/688 kg          (number of pcs) 1bund Q-2959 lb/1342 kg</p> <p>Delivery condition          solution annealed : 1900-2010° F (1040-1100° C) / water          термообработка: закалка в воду</p>

ANALYSIS, %	C	Si	Mn	P	S	Cr	Ni	Mo	Al	Cu	V	W	Ti	Co	Nb	N		
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 № A04358	.025	.47	1.38	.037	.026	16,75	10.24	2.07	.073	.34	.06	.02	.008	.17	.01	.030		

MECHANICAL PROPERTIES	Yield Strength, Ksi(N/mm <sup>2</sup> ) Re (R <sub>e2</sub> )	Tensile Strength, Rm, ksi (N/mm <sup>2</sup> )	Elongation ASTM A370-09 In 2 inches (50mm) or 4D	Reduction of area, Z, %	Brinell Hardness HB	Impact strength, KV, J
REQUIRED	30(205)	75 (515)	45	50	140-223	100
EFFECTIVE	41.8(287)	82.4(566)	64	77	166	297

**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 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  
 We acknowledge that the delivered products conform to the requirements of the order  
 Ratio of reduction-14.3:1

Mechanical properties tested in state of delivery		US - testing		Radiation free; mercury free. No Weld or Weld repair.		Manufacturer: PJSC DNIPROSPETSSTAL Date: 11.02.17 <b>Manager of quality assurance department - V. Kapaieva</b> Signed: Zaporozhye Made in Ukraine.	
		yes	Results: SEP 1921, group 3/class Dd - OK		