

C176570

PJSC DNIPROSPETSSTAL, YUZHNOYE SHOSSE 81, 69008 ZAPOROZHYE, UKRAINE

	<p>Contract No.: 20002 TECHN.PROTOCOL № 210-11 SPEC.№ 3018/P04608 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 Comd.A; AMS 5648L-11;AMS 5653H-12;ASTM A193/A193M-15a GR B8M,CL1 (EXC PAR 6.2);ASME SA-193/SA-193M-13GR B8M,CL1(EXC PAR 7.3)ANSI/NACE MR 0175/ISO 15156-03-15;NACE MR 0103-12</p>	<p>Sheets:4 Sheet: 3 INSPECTION CERTIFICATE EN102043.1 Nr.314551 PLANT ORDER № 8015203018</p>	
	<p>CUSTOMER DSS INTERNATIONAL SA Switzerland</p>	<p>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+АКП Round 6.250in/158.75 mm L=12.754-12.852m/3.890-3.920m L=12.492-12.951m/3.810-3.950m L=12.262-12.820m/3.740-3.910m L=12.820m/3.910m Grade: 316/F316/316L/F316L</p>	<p>QUANTITY: (number of pcs) 1bund Q-4193 lb/1902 kg 1bund Q-4175 lb/1894 kg 1bund Q-4131 lb/1874 kg 1bund Q-1402 lb/636 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 № A04086	.023	.45	1.46	.034	.023	17.06	10.32	2.05	.067	.20	.05	.09	.005	.09	.036	.029		

MECHANICAL PROPERTIES	Yield Strength, Ksi(N/mm²) R _e (R _{e2})	Tensile Strength, Rm,ksi (N/mm²)	Elongation ASTM A370-09 in2inches (50mm) or 4D	Reduction of area, Z %	Brinell Hardness HB	Impact strength, KV, J	TECHNICAL REQUIREMENTS:																									
							Macrostructure – GOOD	GRAIN SIZE : 5 to ASTM E 112-96(2004)																								
REQUIRED	30(205)	75 (515)	45	50	140-223	100	Nonmetallic inclusions ASTM E 45-05 (Method A)	ASTM E 45-05 (Method A)																								
EFFECTIVE	40.8(280)	83.3(572)	60	77	170	251	<table border="0"> <tr> <td colspan="2">A</td> <td colspan="2">B</td> <td colspan="2">C</td> <td colspan="2">D</td> </tr> <tr> <td>thin</td><td>thick</td> <td>thin</td><td>thick</td> <td>thin</td><td>thick</td> <td>thin</td><td>thick</td> </tr> <tr> <td>3.0</td><td>2.0</td> <td>2.0</td><td>1.0</td> <td>0.0</td><td>0.0</td> <td>1.0</td><td>1.0</td> </tr> </table>	A		B		C		D		thin	thick	thin	thick	thin	thick	thin	thick	3.0	2.0	2.0	1.0	0.0	0.0	1.0	1.0	ICC-ASTM A262-08 (practice E)-test: O.K.
A		B		C		D																										
thin	thick	thin	thick	thin	thick	thin	thick																									
3.0	2.0	2.0	1.0	0.0	0.0	1.0	1.0																									
Mechanical properties tested in state of delivery							Dimension/surface defects test, anti-mixing test – OK																									
US - testing yes Results: SEP 1921,group 3/class Dd - OK							We acknowledge that the delivered products conform to the requirements of the order																									
Radiation free; mercury free. No Weld or Weld repair.							Ratio of reduction-15.1:1																									
							Manufacturer: PJSC DNIPROSPETSSTAL Date: 28.11.16 Manager of quality assurance department - V. Kapaieva Signed: Zaporozhye Made in Ukraine.																									

This report is a copy of the original Mill certificate and verifies that the product meets the requirements as originally ordered by
 ESP Speciality Steel Products
 Date 01/01/17 Verified