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

	Contract No.: 50005 TECHN.PROTOCOL № 210-11 SPEC.№4893/PO25873-ED ASTM A182/A182M-10;ASME SA-182/A182M-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 5653F-07;ASTM A193/A193M-10 GR B8M,CL1;ASME SA-193/SA-193M-10GR B8M,CL1;ASTM A320/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: 8 <b>QUALITY CERTIFICATE</b> EN10204/J.1 Nr.257866 PLANT ORDER № 8014904893																		
	 GMS Certified	CUSTOMER <b>DSS INTERNATIONAL SA</b> Switzerland		PRODUCT DESCRIPTION Bars and rods of corrosion-resistant (stainless) steel forged, peeled.Прутки из коррозионностойких (нержавеющих) сталей кованы, обточенные. STEEL MAKING PROCESS: EAF+AOD СПОСОБ ВЫПЛАВКИ: Электродуговая печь+AOP Round 18.75in/476.25mm L=2.715 m/8.902ft; Grade: 316/F316/316L/F316L											QUANTITY: 1bund Q-8699 lb/3946 kg (number of pcs)															
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 № 97378													.020	.42	1.41	.036	.024	17.20	10.34	2.09	.058	.31	.04	.12	.100	.07	.01	.0320		
MECHANICAL PROPERTIES							Yield Strength, Ksi(N/mm <sup>2</sup> ) Re (R <sub>0.2</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	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 1.5 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																	
REQUIRED							30(205)	75 (515)	45	50	140-223	100																		
EFFECTIVE							42.3 (291)	87(597)	59	75	174	198																		
Mechanical properties tested in state of delivery																														
US - testing			yes	Results: SEP 1921,group 3/class Cc - OK								Manufacturer: PJSC DNIPROSPETSSTAL Date: 30.01.12 Manager of quality assurance department - V. Kapaieva      Signed: 																		
Radiation free; mercury free. No Weld or Weld repair.														Zaporozhye Made in Ukraine.																