



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


	Contract No.: 20002 TECHN.PROTOCOL № 390-11 SPEC.№2608/PO51243 DIN EN 10088-3-05,DIN EN 10272-08,DIN EN 10222-5-00;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 5653F-07;ASTM A193/A193M-10GR B8M,CL1; ASME SA-193/SA-193M-10 GR B8,CL 1 ;ASTM A320/A320M-08 GR B8M,CL 1;ASME SA-320/SA-320M-10 GR B8,CL1;NACE MR 0175-03;NACE MR 0103-10		Sheets:4 Sheet: 4 INSPECTION CERTIFICATE EN10204/3.1 Nr.370846 PLANT ORDER № 8014902608
	 CUSTOMER <b>DSS INTERNATIONAL</b> SA Switzerland	<b>PRODUCT DESCRIPTION</b> Bars and rods of corrosion-resistant (stainless) steel forged, peeled.Прутки из коррозионностойких (нержавеющих) сталей кованные, обточенные. <b>STEEL MAKING PROCESS: EAF+AOD</b> <b>СПОСОБ ВЫПЛАВКИ: Электродуговая печь+АКР</b> Round 16.000in/406.40 mm L=7.393ft/2.255m L=7.213 ft/2.200m <b>Grade: 316/316L/1.4401/1.4404</b>	QUANTITY: <b>1bund Q-5291 lb/2400 kg</b> (number of pcs) <b>1bund Q-5163 lb/2342 kg</b>  Delivery condition solution annealed :1940 <sup>o</sup> F(1060 <sup>o</sup> C)water 35minutes термообработка:закалка в воду

ANALYSIS, %	C	Si	Mn	P	S	Cr	Ni	Mo	Al	Cu	V	W	Ti	Co	Nb	N	Sn	B
REQUIRED	<.030	<1,00	1.20-2.00	<.040	.015-.030	16.50-18.00	10.00-13.00	2.00-2.50	<.10	<.40	<.10	<.20	<.15	<.40	<.20	<.10		
CAST № A09969	.024	.44	1.37	.040	.027	16.79	10.25	2.06	.074	.22	.06	.05	.005	.10	.01	.029	.0076	.0023

DIN EN 10002-1,ASTM A370-09										<b>TECHNICAL REQUIREMENTS:</b> Macrostructure – GOOD GRAIN SIZE : 5 to ASTM E 112-96(2004) Nonmetallic inclusions ASTM E 45-05 (Method A) <table style="width: 100%; text-align: center;"> <tr> <td>A</td><td>B</td><td>C</td><td>D</td><td>A</td><td>B</td><td>C</td><td>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>2.0</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> 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/Подтверждаем, что поставленная продукция соответствует требованиям заказа Ratio of reduction-6.3:1										A	B	C	D	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
A	B	C	D	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																																				
MECHANICAL PROPERTIES	Yield Strength, (N/mm <sup>2</sup> ) R0.2% R 1.0%		Tensile Strength, Rm, (N/mm <sup>2</sup> )	Elongation		Reduction of area, Z% L	Brinell Hardness HB	Impact strength, KV, J																																			
				A <sub>s</sub> % L Q	In 2 inches (50mm) or 4D,min,% L			L	Q																																		
REQUIRED	205	240	515-690	45 35	40	50	140-217	100	60																																		
EFFECTIVE	288	320	556	60 54	59	79	163	211 211 211	61 61 61																																		

Mechanical properties tested in state of delivery		
US - testing	yes	Results: ASTM A388/A388M-FBH1/5";EN 10228-4 type 1a;class 3:OK
Radiation free; mercury free. No Weld or Weld repair.		

Date: 15.06.2021 Manager of quality assurance department  
 - V. Kapaieva Signed:  
 Zaporozhnye  
 Melted and Produced in Ukraine.  
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P.O. # 6315 Part # 12-FOE-STD Desc: 12" CPA 50E STD 316 S/S