

C229099

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

	Contract No.: 20002 TECHN.PROTOCOL № 390-11 SPEC.№0111/PO44618 DIN EN 10088-3-05, DIN EN 10272-08, AD2000-Merkblatt W2; AD 2000-Merkblatt W10; 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: 1 <b>INSPECTION CERTIFICATE EN10204/3.1 Nr.337468</b> PLANT ORDER № 8014900111
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	<b>CUSTOMER</b> <b>DSS INTERNATIONAL</b> <b>SA Switzerland</b>	<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 6.250in/158.75 mm L=5.640m/18.492ft <b>Grade: 316/316L/1.4401/1.4404</b>	QUANTITY: (number of pcs) <b>1bund Q-4048 lb/1836 kg</b>  Delivery condition solution annealed :1900 <sup>o</sup> F(1040 <sup>o</sup> C)water 30minutes термообработка:закалка в воду
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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 № A06341	.020	.43	1.29	.040	.027	16,87	10.20	2.03	.064	.29	.05	.06	.005	.12	.01	.026	.0108	.0025

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>2.5</td><td>1.5</td><td>1.5</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 Ratio of reduction-15.1:1										A	B	C	D	A	B	C	D	thin	thick	thin	thick	thin	thick	thin	thick	2.5	1.5	1.5	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																																				
2.5	1.5	1.5	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																																			
REQUIRED	205	240	515-690	A <sub>5</sub> % L Q	In 2 inches (50mm) or 4D, min, % L			L	Q																																		
EFFECTIVE	280 282	317 329	563 567	62 - 61 -	57 57	77 77	167 167	230 230 230 226 226 226	- -																																		
Mechanical properties tested in state of delivery																																											

US - testing	yes	Results: ASTM A388/A388M-FBH1/8"; EN 10308 type 1a; class 3:OK	Manufacturer: PrJSC DNIPROSPETSSTAL Date: 31.08.18 <b>Manager of quality assurance department - V. Kapaieva</b> Signed: Zaporozhye Made in Ukraine.
Radiation free; mercury free. No Weld or Weld repair.			

July 3/15

ANS