



C311185

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

	Contract No.: 20002 TECHN.PROTOCOL № 390-11 SPEC.№4176/PO52377 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	<b>INSPECTION CERTIFICATE EN10204/3.1 Nr.376539</b> PLANT ORDER № 8014904176
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	<b>CUSTOMER</b> <b>DSS INTERNATIONAL</b> SA Switzerland	<b>PRODUCT DESCRIPTION</b> Bars and rods of corrosion-resistant (stainless) steel forged, pecked. Прутки из коррозионноустойчивых (нержавеющих) сталей кованные, обточенные. <b>STEEL MAKING PROCESS: EAF+AOD</b> <b>СПОСОБ ВЫПЛАВКИ: Электродуговая печь+АКР</b> Round 18.750in/476.25 mm L=10.836 ft/3.305m <b>Grade: 316/316L/1.4401/1.4404</b>	<b>QUANTITY:</b> (number of pcs) <b>1bund Q-10600lb/4808 kg</b>  Delivery condition solution annealed :1940° F(1060° C)water 28minutes 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 № A10688	.020	.44	1.48	.040	.025	16.79	10.22	2.06	.073	.35	.06	.04	.005	.14	.01	.035	.011	.0024

DIN EN 10002-1, ASTM A370-09										TECHNICAL REQUIREMENTS:																															
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																																	
	L	Q		A5 %	In 2 inches (50mm) or 4D,min,% L			L	Q	ASTM E 112-96(2004)				ASTM E 45-05 (Method A)																											
REQUIRED	205	240	515-690	45 35	40	50	140-217	100	60	Macrostructure – GOOD				GRAIN SIZE : 5 to ASTM E 112-96(2004)																											
EFFECTIVE	290	321	560	61 54	60	79	163	212 212 212	63 63 63	Nonmetallic inclusions ASTM E 45-05 (Method A)				<table border="0"> <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>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	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
A	B	C	D	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										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-7.5:1																															

US - testing	yes	Results: ASTM A388/A388M-FBH1/5"; EN 10228-4 type 1a; class 3:OK	Date: 31.12.2021 Manager of quality assurance department - V. Kapaieva Signed: Zaporozhye Melted and Produced in Ukraine. MELTED and MANUFACTURED PrJSC " Dniprospeetsstal" Phone number +380612834255 e-mail: info@dss.com.ua http://www.dss-ua.com
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Radiation free; mercury free. No Weld or Weld repair.