




HT# A01073

C114787

PJSC DNIPROSPETSSTAL, YUZHNOYE SHOSSE 81, 69008 ZAPOROZHYE, UKRAINE																																																																												
	Contract No.: 20002 TECHN.PROTOCOL № 390-11 SPEC.№3734/P033051-ED 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-10 GR 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: 7 Sheet: 1 INSPECTION CERTIFICATE EN10204/3.1 Nr.287092 PLANT ORDER № 8014903734																																																																
		CUSTOMER DSS INTERNATIONAL 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 15.000in/381.00 mm L=4.630m/15.180ft Grade: 316/316L/1.4401/1.4404											<b>QUANTITY:</b> (number of pcs) 1bund Q-9546 lb/4330 kg  <b>Delivery condition</b> solution annealed :1940° F(1060° C)water 34minutes термообработка:закалка в воду																																																												
<table border="1"> <thead> <tr> <th>ANALYSIS, %</th> <th>C</th> <th>Si</th> <th>Mn</th> <th>P</th> <th>S</th> <th>Cr</th> <th>Ni</th> <th>Mo</th> <th>Al</th> <th>Cu</th> <th>V</th> <th>W</th> <th>Ti</th> <th>Co</th> <th>Nb</th> <th>N<sub>2</sub></th> <th>Sn</th> <th>B</th> </tr> </thead> <tbody> <tr> <td>REQUIRED</td> <td>&lt;.030</td> <td>&lt;1.00</td> <td>1.20-2.00</td> <td>&lt;.040</td> <td>.015-.030</td> <td>16.50-18.00</td> <td>10.00-13.00</td> <td>2.00-2.50</td> <td>&lt;10</td> <td>&lt;.40</td> <td>&lt;10</td> <td>&lt;.20</td> <td>&lt;.15</td> <td>&lt;.40</td> <td>&lt;.20</td> <td>&lt;.10</td> <td></td> <td></td> </tr> <tr> <td>CAST № A01073</td> <td>.023</td> <td>.44</td> <td>1.32</td> <td>.034</td> <td>.022</td> <td>16.89</td> <td>10.26</td> <td>2.09</td> <td>.076</td> <td>.21</td> <td>.04</td> <td>.11</td> <td>.005</td> <td>.07</td> <td>.01</td> <td>.027</td> <td>.012</td> <td>.0011</td> </tr> </tbody> </table>																			ANALYSIS, %	C	Si	Mn	P	S	Cr	Ni	Mo	Al	Cu	V	W	Ti	Co	Nb	N <sub>2</sub>	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 № A01073	.023	.44	1.32	.034	.022	16.89	10.26	2.09	.076	.21	.04	.11	.005	.07	.01	.027	.012	.0011	
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DIN EN 10002-1, ASTM A370-09																																																																												
<b>MECHANICAL PROPERTIES</b>		Yield Strength, (N/mm <sup>2</sup> ) R0.2% R 1.0%		Tensile Strength, Rm, (N/mm <sup>2</sup> )		Elongation A5% L Q In 2 inches (50mm) or 4D,min,% L		Reduction of area, Z% L		Brinell Hardness HB		Impact strength, KV, J L Q		<b>TECHNICAL REQUIREMENTS:</b> Macrostructure – GOOD GRAIN SIZE: 5 to ASTM E 112-96(2004) 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></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></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><td>thin</td><td>thick</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td>2.5</td><td>2.5</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><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> </table> ICC-ASTM A262-08 (practice E)-test: O.K. Dimension/surface defects test, anti-mixing test – OK.						A	B	C	D																thin	thick	thin	thick	thin	thick	thin	thick	thin	thick										2.5	2.5	2.0	1.0	0.0	0.0	1.0	1.0											
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REQUIRED		205	240	515-690	45 35	40	50	140-223	100	60																																																																		
EFFECTIVE		265 263	297 295	561 565	61 54 61 54	60 60	79 79	163 163	204 200 197 199 200 206	65 65 65 64 64 64																																																																		
Mechanical properties tested in state of delivery																																																																												
US - testing		yes		Results: ASME SA-388/SA-388M-10(ASTM A 388/A 388M-09)-FBH1/5"; EN 10228-4 type 1a; class 3:OK.																																																																								
Radiation free; mercury free. No Weld or Weld repair.																																																																												
Manufacturer: PJSC DNIPROSPETSSTAL Date: 14.08.14 Manager of quality assurance department - V. Kapaieva Signed:  Zaporozhye Made in Ukraine.																																																																												