


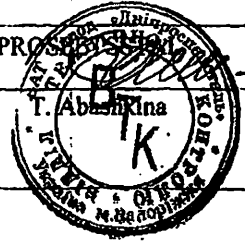


93282.

	<p>JSC DNEPROSPETSSTAL YUZHNOYE SHOSSE 69008, ZAPOROZHYE UKRAINE</p>		<p>Purchase order No.: 07218 <small>ТЕХНИЧЕСКОЕ № 210-06 СПЕЦ №1278 19769-00 СШ ASTM A182 A182M-02; ASTM SA-193 SA-193M-04; ASTM A276-04; ASTM A279 A279M-04; ASTM SA-179 SA-179M-04; ASTM A 384/A 384M-05 ASTM A 384/A 384M-04; ASTM A 384/A 384M-05 ASTM A 193 A 193M-04; GCR 188, L 1 ASTM SA-193 SA-193M-04 GCR 188, C L 1</small></p>										<p><i>Sheets: 4 Sheet: 3</i> QUALITY CERTIFICATE EN10204/3.1 Nr.210001 PLANT ORDER № 8072181278</p>																																																															
<p>CUSTOMER</p>			<p>PRODUCT DESCRIPTION <i>Rods of corrosion-resistant (stainless) steel forged peeled. Прутки из коррозионностойких (нержавеющих) сталей кованные обточенные.</i> STEEL MAKING PROCESS: EAF+AOD СПОСОБ ВЫПЛАВКИ: Электродуговая печь+АКР <i>Round 9.000in</i> 228.60 mm L=5.00m L=4.56m L=5.16m L=5.13m Grade: 316/F316/316L/F316L</p>										<p>QUANTITY: (number of pcs) 1bund Q-3748 lb/1700 kg 1bund Q-3373 lb/1530 kg 1bund Q-3814 lb/1730 kg 1bund Q-3770 lb/1710 kg</p>																																																															
<p>Delivery condition <i>solution annealed: 1900-2010° F(1040-1100° C)/water термообработка: закалка в воду</i></p>			<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th style="width: 10%;">ANALYSES, %</th> <th style="width: 3%;">C</th> <th style="width: 3%;">Si</th> <th style="width: 3%;">Mn</th> <th style="width: 3%;">P</th> <th style="width: 3%;">S</th> <th style="width: 3%;">Cr</th> <th style="width: 3%;">Ni</th> <th style="width: 3%;">Mo</th> <th style="width: 3%;">Al</th> <th style="width: 3%;">Cu</th> <th style="width: 3%;">V</th> <th style="width: 3%;">W</th> <th style="width: 3%;">Ti</th> <th style="width: 3%;">Co</th> <th style="width: 3%;">Nb</th> <th style="width: 3%;">N₂</th> <th style="width: 3%;"></th> <th style="width: 3%;"></th> </tr> <tr> <td>REQUIRED</td> <td><.030</td> <td><1.00</td> <td>1.25-2.00</td> <td><.040</td> <td>.020-.030</td> <td>16.00-18.00</td> <td>10.00-14.00</td> <td>2.00-3.00</td> <td><.10</td> <td><.40</td> <td><.10</td> <td><.20</td> <td><.15</td> <td><.40</td> <td><.20</td> <td><.10</td> <td></td> <td></td> </tr> <tr> <td>CAST № 93282</td> <td>.020</td> <td>.70</td> <td>1.38</td> <td>.035</td> <td>.024</td> <td>16.33</td> <td>10.14</td> <td>2.02</td> <td>.060</td> <td>.27</td> <td>.06</td> <td>.14</td> <td>.14</td> <td>.069</td> <td>.023</td> <td>.033</td> <td></td> <td></td> </tr> </table>																	ANALYSES, %	C	Si	Mn	P	S	Cr	Ni	Mo	Al	Cu	V	W	Ti	Co	Nb	N ₂			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 № 93282	.020	.70	1.38	.035	.024	16.33	10.14	2.02	.060	.27	.06	.14	.14	.069	.023	.033		
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<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th style="width: 15%;">MECANICAL PROPERTIES</th> <th style="width: 10%;">Yield Strength, Ksi(N/mm²) <i>Re (R_{0.2})</i></th> <th style="width: 10%;">Tensile Strength, Rm,ksi (N/mm²)</th> <th style="width: 10%;">Elongation A₅ %</th> <th style="width: 10%;">Reduction of area, Z %</th> <th style="width: 10%;">Brinell Hardness HB</th> <th style="width: 10%;">Impact strength, KV, J</th> </tr> <tr> <td>REQUIRED</td> <td>30(205)</td> <td>75 (515)</td> <td>45</td> <td>50</td> <td>140-223</td> <td>100</td> </tr> <tr> <td>EFFECTIVE</td> <td>38,0(262)</td> <td>77.2(533)</td> <td>65</td> <td>77</td> <td>156</td> <td>190</td> </tr> </table>			MECANICAL PROPERTIES	Yield Strength, Ksi(N/mm ²) <i>Re (R_{0.2})</i>	Tensile Strength, Rm,ksi (N/mm ²)	Elongation A ₅ %	Reduction of area, Z %	Brinell Hardness HB	Impact strength, KV, J	REQUIRED	30(205)	75 (515)	45	50	140-223	100	EFFECTIVE	38,0(262)	77.2(533)	65	77	156	190	<p>TECHNICAL REQUIREMENTS: Macrostructure - <i>GOOD</i> GRAIN SIZE: 5 to ASTM E 112 Nonmetallic inclusions ASTM E 45 (Method A) <table style="width: 100%; text-align: center;"> <tr> <td colspan="2">A</td> <td colspan="2">B</td> <td colspan="2">C</td> <td colspan="2">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>1.5</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> </tr> </table> ICC-ASTM A262-02a(Method E)-test: O.K. „Dimension/surface defects test, anti-mixing test - O.K.“ Ratio of reduction-8,84 NOTE: The customer confirms that the above stated requirements to chemical composition, dimensions, mechanical properties, packing, marking and inspection certificate comply with the specification SSI Rev3.</p>														A		B		C		D		thin	thick	thin	thick	thin	thick	thin	thick	2.0	1.5	2.0	1.0	0.0	0.0	1.0	1.0															
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<p>Heat treatment (specimen) Delivery condition: In state of delivery</p>			<p>US - testing yes Results: SEP 1921, 3/Cc - O.K.</p>																																																																									
<p>Radiation free; mercury free. No Weld or Wejd repair.</p>			<p>Manufacturer: JSC DNEPROSPETSSTAL Date: 08.04.08 Signed:  Zaporozhyc Made in Ukraine.</p> <div style="text-align: right;">  </div>																																																																									

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