



**A00386 (13")**

C104036


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

	Contract No.: 20002 TECHN.PROTOCOL № 390-11 SPEC.№2647/P032284-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: 2                      Sheet: 2 <b>QUALITY CERTIFICATE EN10204/3.1 Nr.282247</b> PLANT ORDER № 8014902647
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 GMS Certified	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 кованы, обточенные. <b>STEEL MAKING PROCESS: EAF+AOD</b> <b>СПОСОБ ВЫПЛАВКИ: Электродуговая печь-AKP</b> Round 13.000in/330.20 mm L=2.670m/8.754ft Grade: 316/316L/1.4401/1.4404	QUANTITY: (number of pcs)                      1bund Q-4114 lb/1866 kg  Delivery condition solution annealed : 1922 <sup>0</sup> F(1050 <sup>0</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 <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 № A00386	.020	.46	1.32	.037	.027	16,88	10.20	2.08	.072	.26	.05	.10	.005	.08	.011	.036	.013	.001

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></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> </tr> <tr> <td>3.0</td><td>2.0</td><td>3.0</td><td>2.0</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										A	B	C	D					thin	thick	thin	thick	thin	thick	thin	thick	3.0	2.0	3.0	2.0	0.0	0.0	1.0	1.0
A	B	C	D																																								
thin	thick	thin	thick	thin	thick	thin	thick																																				
3.0	2.0	3.0	2.0	0.0	0.0	1.0	1.0																																				
MECHANICAL PROPERTIES	Yield Strength, (N/mm <sup>2</sup> ) R <sub>0.2%</sub> R <sub>1.0%</sub>		Tensile Strength, R <sub>m</sub> , (N/mm <sup>2</sup> )	Elongation		Reduction of area, Z % L	Brinell Hardness HB	Impact strength, KV, J																																			
				A <sub>5</sub> % L Q	In 2 inches (50mm) or 4D, min, % L			L	Q																																		
REQUIRED	205	240	515-690	45 35	40	50	140-223	100	60																																		
EFFECTIVE	285 288	294 298	568 570	59 55 60 55	58 58	77 77	167 167	198 198 195 192 192 190	63 63 63 62 62 62																																		

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	Manufacturer: PJSC DNIPROSPETSSTAL Date: 24.03.14    Manager of quality assurance department - V. Kapaieva Signed:   Zaporozhye Made in Ukraine.
Radiation free; mercury free. No Weld or Weld repair.			