

Q 200713

HT# A05334

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

	Contract No.: 20002 TECHN.PROTOCOL № 390-11 SPEC.№6955/PO42378-ED DIN EN 10088-3-05, DIN EN 10272-08, DIN EN 10222-5-00, 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: 3 <b>INSPECTION CERTIFICATE EN10204/3.1 Nr.327100</b> PLANT ORDER № 8014906955
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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, peeled.Прутки из коррозионностойких (нержавеющих) сталей кованные, обточенные. <b>STEEL MAKING PROCESS: EAF+AOD</b> <b>СПОСОБ ВЫПЛАВКИ:Электродуговая печь+AKP</b> Round 15.000in/381.00 mm L=16.918ft/5.16 m; Grade: 316/316L/1.4401/1.4404	<b>QUANTITY:</b> <b>1bund Q-10582lb/4800 kg</b> (number of pcs)
			Delivery condition solution annealed :1922° F(1050° C)water 30minutes термообработка:закалка в воду

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 № A05334	.021	.44	1.32	.039	.024	17.15	10.32	2.08	.072	.30	.05	.12	.005	.10	.023	.032	.009	.0026

DIN EN 10002-1,ASTM A370-09

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		A <sub>s</sub> % L	In 2 inches (50mm) or 4D,min,% L			L	Q	L	Q			
REQUIRED	205	240	515-690	45	35	40	50	140-217	100	60				
EFFECTIVE	275 279	296 298	564 566	58	52	57	75 75	167 167	219 219 219 216 216 216	66 66 66 64 64 64				

**TECHNICAL REQUIREMENTS:**  
 Macrostructure – GOOD  
 GRAIN SIZE : 5 to ASTM E 112-96(2004)  
 Nonmetallic inclusions ASTM E 45-05 (Method A)  

A	B	C	D
thin	thick	thin	thick
2.0	1.5	2.0	1.5
0.0	0.0	1.0	1.0

 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

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
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Radiation free; mercury free. No Weld or Weld repair.

Manufacturer:PrJSC DNIPROSPETSSTAL  
 Date: 10.11.17      Manager of quality assurance department - V. Kapaieva  
 Signed:   
 Zaporozhye  
 Made in Ukraine.