



C234489

PrJSC DNIPROSPETSSTAL, YUZHNOYE SHOSSE 81, 69008 ZAPOROZHYE, UKRAINE

	Contract No.: 20002 TECHN.PROTOCOL № 390-11 SPEC.№0549/PO44837 DIN EN 10088-3-05, DIN EN 10272-08, DIN EN 10222-5-00, AD2000-Merkblatt W2:AD 2000-Merkblatt W10: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, CL 1, NACE MR 0175-03, NACE MR 0103-10	Sheets:4 Sheet: 3 INSPECTION CERTIFICATE EN10204/3.1 Nr.341104 PLANT ORDER № 8014900549
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 QMS Certified	CUSTOMER DSS INTERNATIONAL SA Switzerland	PRODUCT DESCRIPTION Bars and rods of corrosion-resistant (stainless) steel forged, peeled. Прутки из коррозионноустойчивых (нержавеющих) сталей кованные, обточенные. STEEL MAKING PROCESS: EAF+AOD СПОСОБ ВЫПЛАВКИ: Электродуговая печь АКР Round 8.500in/215.90 mm L=15.557 ft/4.745m L=17.000 ft/5.185m L=15.131 ft/4.615m Grade: 316/316L/1.4401/1.4404	QUANTITY: (number of pcs) 1bund Q-3170 lb/1438 kg 1bund Q-3461 lb/1570 kg 1bund Q-3082 lb/1398 kg Delivery condition solution annealed :1976° F(1080° C) water 20minutes 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 № A06748	.022	.39	1.29	.040	.026	17.08	10.33	2.09	.068	.33	.05	.07	.008	.11	.01	.021	.011	.0021


DIN EN 10002-1, ASTM A370-09

MECHANICAL PROPERTIES	Yield Strength, (N/mm ²) R0.2% R 1.0%		Tensile Strength, Rm, (N/mm ²)	Elongation		Reduction of area, Z % L	Brinell Hardness HB	Impact strength, KV, J	
				A5% 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	291 293	309 313	571 571	60 59 60 59	55 54	79 79	167 167	202 200 200 200 202 202	62 62 62 63 63 63

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 thin thick thin thick
 2.0 2.0 2.0 1.0 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
 Ratio of reduction-7.2:1

Mechanical properties tested in state of delivery

US - testing	yes	Results: ASTM A388/A388M)-FBH1/8"; EN 10228-4 type Ia; class 3:OK
Radiation free; mercury free. No Weld or Weld repair.		

Manufacturer: PrJSC DNIPROSPETSSTAL
 Date: 26.12.18 **Manager of quality assurance department - V. Kapaieva**
 Signed: 
 Zaporozhye
 Made in Ukraine.

ANS