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PrJSC DNIPROSPETSSTAL, YUZHNOYE SHOSSE 81, 69008 ZAPOROZHYE, UKRAINE

	<p>Contract No.: 20002 TECHN.PROTOCOL № 390-11 SPEC.№2914/PO46181 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-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</p>	<p>INSPECTION CERTIFICATE EN10204/3.1 Nr.346135 PLANT ORDER № 8014902914</p>
 QMS Certified	<p>CUSTOMER DSS INTERNATIONAL SA Switzerland</p> <p>PRODUCT DESCRIPTION Bars and rods of corrosion-resistant (stainless) steel forged, peeled.Прутки из коррозионностойких (нержавеющих) сталей кованные, обточенные. STEEL MAKING PROCESS: EAF+AOD СПОСОБ ВЫПЛАВКИ:Электродуговая печь+АКР Round 15.000in/381.00 mm L=8.033 ft/2.450m L=8.000 ft/2.440m Grade: 316/316L/1.4401/1.4404</p>	<p>QUANTITY: 1bund Q-5018 lb/2276 kg (number of pcs) 1bund Q-4987 lb/2262 kg</p> <p>Delivery condition solution annealed :1950⁰ F(1065⁰ C)water 30minutes термообработка:закалка в воду</p>

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 № A07299	.021	.47	1.38	.035	.027	16.85	10.24	2.07	.083	.34	.05	.08	.007	.12	.027	.029	.012	.0024

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	
	L	Q		A ₅ % L Q	In 2 inches (50mm) or 4D,min,% L			L	Q
REQUIRED	205	240	515-690	45 35	40	50	140-217	100	60
EFFECTIVE	278	300	584	61 55	59	72	174	184 184 184	66 66 66


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
3.0 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-6.7:1

Mechanical properties tested in state of delivery

US - testing yes Results: ASTM A388/A388M-FBH1/5";EN 10228-4 type 1a;class 3:OK

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

Manufacturer:PrJSC DNIPROSPETSSTAL
Date: 07.06.19 **Manager of quality assurance department - V. Kapaieva**
Signed: 
Zaporozhye
Made in Ukraine.

ANS