



# HT# A05798

C212994

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

	Contract No.: 20002 TECHN.PROTOCOL № 390-11 SPEC.№8367/PO43227 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	Sheets: 1 Sheet: 1 INSPECTION CERTIFICATE EN10204/3.1 Nr.332202 PLANT ORDER № 8014908367
---	---	---

 <p>GMS Certified</p>	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 кованные, обточенные. <b>STEEL MAKING PROCESS: EAF+AOD</b> <b>СПОСОБ ВЫПЛАВКИ: Электродуговая печь+АКР</b> Round 15.000in/381.00 mm L=8.230 ft/2.510m Grade: 316/316L/1.4401/1.4404	QUANTITY: (number of pcs) <b>1bund Q-5115 lb/2320 kg</b>  Delivery condition solution annealed :1976° F(1080°C)water 34minutes термообработка:закалка в воду
--	--	--	---

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 № A05798	.019	.40	1.43	.038	.023	16,90	10.25	2.05	.072	.33	.05	.08	.005	.11	.01	.027	.0095	.0022

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>5</sub> % 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	293	313	563	63 54	58	81	167	181 181 181	68 68 68

**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	2.0	2.0	1.0
0.0	0.0	0.0	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: 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: 03.04.18 Manager of quality assurance department - V. Kapaieva  
 Signed:   
 Zaporozhye  
 Made in Ukraine.