

HT# A06586 SN# 4984

C231846

PrJSC DNIPROSPETSSTAL, YUZHNOYE SHOSSE 81, 69008 ZAPOROZHYE, UKRAINE

Contract No.: 20002
 TECHN. PROTOCOL № 390-11 SPEC. №05/49/PO44837
 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, CL. 1, 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: 4**
INSPECTION CERTIFICATE EN10204/3.1 Nr.:339863
PLANT ORDER № 8014900549

QUANTITY:
 (number of pcs) **1 bund Q-10626 lb/4820 kg**

Delivery condition
 solution annealed : 1922° F(1050° C) water 36minutes
 термообработка: закалка в воду

PRODUCT DESCRIPTION
 Bars and rods of corrosion-resistant (stainless) steel forged, peeled. Продукт из коррозионностойких (нержавеющих) стальных кованых, обточенных.

CUSTOMER
DSS INTERNATIONAL
 SA Switzerland

STEEL MAKING PROCESS: EAF+AOD
СПЕЦИАЛЬНОСТЬ: Электроплавочная печь+АКР
 Round 18.750m/476.25 mm L=10.689 ft/3.260m
Grade: 316/316L/1.4401/1.4404

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 № A06586	.021	.43	1.31	.037	.026	17.00	10.36	2.13	.078	.27	.05	.05	.005	.10	.01	.023	.009	.0018

MECHANICAL PROPERTIES
 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		Reducti on of area, Z, % L	Brinell Hardness HB	Impact strength, K V, J													
			A ₅ % L	Q			L	Q	Q											
REQUIRED	205	515-690	45-35	40	50	140-223	100	60												
EFFECTIVE	283	581	60-53	59	79	170	197	197	67	67										

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
 3.0 2.0 3.0 2.0 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-7.4:1

US - testing yes Results: ASTM A388(A388M)-FBH/5"; EN 10228-4 type Ia; class 3:OK

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

Manufacturer: PrJSC DNIPROSPETSSTAL
 Date: 15.11.18 **Manager of quality assurance department - V. Kapaieva**
 Signed: *[Signature]*
 Zaporozhye
 Made in Ukraine.

LWS