C219698

PrJSC DNIPROSPETSSTAL, YUZHNOYE SHOSSE 81, 69008 ZAPOROZHYE, UKRAINE

Contract No.: 20002
TECHN.PROTOCOL № 390-11 SPEC.№9398/PO44029
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:4 **Sheet: 4**
INSPECTION CERTIFICATE EN10204/3.1 **Nr.334825**
PLANT ORDER № 8014909398

QMS Certified

CUSTOMER
DSS INTERNATIONAL
SA Switzerland

PRODUCT DESCRIPTION
Bars and rods of corrosion-resistant (stainless) steel forged, peeled.Прутки из коррозионностойких (пержавеющих) сталей кованые, обточенные.
STEEL MAKING PROCESS: EAF+AOD
СПОСОБ ВЫПЛАВКИ:Электродуговая печь+АКР
Round 13.000in/330.20 mm L=11.377 ft/3.470m L=9.967 ft/3.040m
Grade: 316/316L/1.4401/1.4404

QUANTITY: **1bund Q-5366 lb/2434 kg**
(number of pcs) **1bund Q-4660 lb/2114 kg**

Delivery condition
solution annealed :1940^{0}F(1060^{0}C)water 36minutes
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 № A06028	.020	.45	1.35	.040	.026	16,88	10.32	2.07	.065	.32	.05	.05	.01	.11	.013	.023	.012	.0027

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 A_5% L Q	Elongation In 2 inches (50mm) or 4D,min,% L	Reduction of area, Z % L	Brinell Hardness HB	Impact strength, KV, J L	Impact strength, KV, J Q
REQUIRED	205	240	515-690	45 35	40	50	140-217	100	60
EFFECTIVE	269	301	569	59 48	58	79	163	189 189 189	79 79 79

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.

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	1.5	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-6.6:1

Manufacturer:PrJSC DNIPROSPETSSTAL
Date: 13.06.18 **Manager of quality assurance department** - V. Kapaieva
Signed:
Zaporozhye
Made in Ukraine.

AN5