C229104

PrJSC DNIPROSPETSSTAL, YUZHNOYE SHOSSE 81, 69008 ZAPOROZHYE, UKRAINE

Contract No.: 20002
TECHN.PROTOCOL № 390-11 SPEC.№0111/PO44618
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-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:2 **Sheet: 2**
INSPECTION CERTIFICATE EN10204/3.1 Nr.337662
PLANT ORDER № 8014900111

QMS Certified

CUSTOMER
DSS INTERNATIONAL SA Switzerland

PRODUCT DESCRIPTION
Bars and rods of corrosion-resistant (stainless) steel forged, peeled.Прутки из коррозионностойких (нержавеющих) сталей кованые, обточенные.
STEEL MAKING PROCESS: EAF+AOD
СПОСОБ ВЫПЛАВКИ:Электродуговая печь+АКР
Round 8.500in/215.90 mm L=4.820m/15.803ft L=4.690m/15.377ft
Grade: 316/316L/1.4401/1.4404

QUANTITY: **1bund Q-3232 lb/1466 kg**
(number of pcs) **1bund Q-3139 lb/1424 kg**

Delivery condition
solution annealed :1922^{0}F(1050^{0}C)water 25minutes
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 № A06323	.019	.44	1.36	.040	.027	16,86	10.30	2.09	.071	.36	.05	.05	.005	.12	.01	.026	.014	.0027

DIN EN 10002-1,ASTM A370-09

MECHANICAL PROPERTIES	Yield Strength, (N/mm²) R0.2%	R 1.0%	Tensile Strength, Rm, (N /mm²)	Elongation A5 % L	Q	In 2 inches (50mm) or 4D,min,% L	Reduction of area, Z % L	Brinell Hardness HB	Impact strength, KV, J L	Q
REQUIRED	205	240	515-700	45	35	40	50	140-217	100	60
EFFECTIVE	283 285	304 308	557 560	58 58	48 48	57 57	73 73	163 163	190 190 190 184 184 184	65 65 65 64 64 64

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
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
Ratio of reduction-8.3:1

Manufacturer:PrJSC DNIPROSPETSSTAL
Date: 07.09.18 **Manager of quality assurance department** - V. Kapaieva
Signed:
Zaporozhye
Made in Ukraine.

AWS