95829 (11). C02C22

DNEPROSPETSSTAL, YUZHNOYE SHOSSE 81, ZAPOROZHYE 69008, UKRAINE

QMS Sertified

EN10204/3.1

Sheets:9 Sheet: 7

QUALITY CERTIFICATE Nr.242440

PLANT ORDER № 8014901462

Contract No.: 50005

TECHN.PROTOCOL № 210-06 SPEC.№1462/PO23042

ASTM A182/A182M-05;ASME SA-182/SA-182M-04;ASTM A276-04;

ASTM A479/A479M-04;ASTME SA-479/SA-479M-04;ASTM A484/A484M-05; AMS-QQ-S-763A-03

Cond.A;NACE MR 0175-2003;AMS 5648K-02;AMS 5653F-02; ASTM A193/A193M-04c GR B8M,CL1

ASME SA-193/SA-193M-04GR B8M,CL1;NACE MR0103

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 11.000in/279.40 mm L=3.79m/12.43ft
Grade: 316/F316/316L/F316L

QUANTITY:
(number of pcs) 1bund Q-4198 lb/1904 kg

Delivery condition
solution annealed -1900-2010°F(1040-1100°C)/water 19minutes
термообработка: закалка в воду

ANALYSES, %	C	Si	Mn	P	S	Cr	Ni	Mo	Al	Cu	V	W	Ti	Co	Nb	N_2		
REQUIRED	<.030	<1,00	1.25-2.00	<.040	.020-.030	16.00-18.00	10.00--14.00	2.00--3.00	<.10	<.40	<.10	<.20	<.15	<.40	<.20	<.10		
HEAT № 95829	.025	.38	1.40	.034	.022	16.75	10.26	2.13	.077	.22	.05	.20	.11	.07	.01	.043		

ASTM A370-08a

MECANICAL PROPERTIES	Yield Strength, Ksi(N/mm²) Re ($R_{0.2}$)	Tensile Strength, Rm,ksi (N/mm²)	Elongation in 2 inches (50mm) or 4D,min,% (ASTM A370)	Reduction of area, Z %	Brinel Hardness HB	Impact strength, KV, J
REQUIRED	36(248)	75 (515)	45	50	140-223	100
EFFECTIVE	37(254)	79.3(545)	54	75	163	198

Mechanical properties tested in state of delivery

US - testing	yes	Results: SEP 1921, 3/ Cc - O.K.

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

TECHNICAL REQUIREMENTS:
Macrostructure – GOOD
GRAIN SIZE : 5 to ASTM E 112
Nonmetallic inclusions ASTM E 45 (Method A)

A		B		C		D	
thin	thick	thin	thick	thin	thick	thin	thick
2.0	1.5	2.0	1.5	0	0	1.0	1.0

ICC-ASTM A262-02a(Method E)-test: O.K.
„Dimension/surface defects test,anti-mixing test – O.K."
Ratio of reduction- 7.6:1

QA ACCEPTED
MAR 2 3 2011
ASA ALLOYS
EDMONTON

Manufacturer: JSC DNEPROSPETSSTAL
Date: 18.01.11 Signed: V.Kapitonov

Zaporozhye
Made in Ukraine.