C002431

94111

QMS Sertified

DNEPROSPETSSTAL,YUZHNOYE SHOSSE 81, ZAPOROZHYE 69008,UKRAINE

Contract No.: 07339
TECHN.PROTOCOL № 267-07 SPEC.№ 3730/P00922
„AD 2000-Merkblatt WO/TRD 100,97/23/EG(DGRL)"
"DIN EN 10088-3,DIN EN 10272,ASTM A182/A182M-05,ASME SA-182/SA-182M-04,ASTM A276-04,ASTM A479/A479M-04, ASME SA-479/SA-479M-04,ASTM A484/A484M-05,AMS-QQ-S-763A-03,QQS-763F, Cond.A,NACE MR 0175,AMS 5648K-02, AMS 5653F-02,ASTM A193/A193M-04c GR B8M,CL 1 D,ASME SA-193/SA-193M-04 GR B8M,CL 1D"

Sheets:5 Sheet: 2
QUALITY CERTIFICATE EN10204/3.1Nr.223841
PLANT ORDER № 8073393730

CUSTOMER
„DSS INTERNATIONAL SA"
Switzerland

PRODUCT DESCRIPTION
Rods of corrosion-resistant (stainless) steel forged, peeled .
Прутки из коррозионностойких (нержавеющих) сталей кованые,обточенные.
STEEL MAKING PROCESS: Electric furnace
СПОСОБ ВЫПЛАВКИ:Электродуговая печь
Round 228.60 mm/9.00in L=5.38m/17.64 ft
Grade: 316/316L/1.4404

QUANTITY: 1hund. Q-3990 lb/1810 kg
(number of pcs)

Delivery condition
Heat-treated (solution annealing 1020-1100^{0}water)
С термич.обраб.(закалка в воду 1020-1100^0)

ANALYSES, %	C	Si	Mn	P	S	Cr	Ni	Mo	Al	Cu	V	W	Ti	Co	Nb	N_2	Sn	B
REQUIRED	<.030	<1,00	1.25-2.00	<.040	<.030	16.50-18.00	10.00--13.00	2.00--2.50	<.10	<.40	<.10	<.20	<.15	<.40	<.20	<.10		
CAST № 94111	.025	.36	1.36	.039	.023	16.77	10.03	2.00	.070	.26	.03	.10	.122	.076	.010	.032	.007	.0015

T.19B

MECANICAL PROPERTIES	Yield Strength, (N /mm²) R0.2%	R1.0%	Tensile Strength, Rm, (N /mm²)	Elongation A_5 % L	Q	Reduction of area, Z % L	Q	Brinel Hardness HB	Impact strength, KV, J L	Q
REQUIRED	205	240	515-690	40		50		Max 215	100	
EFFECTIVE	240	272	523	61		73,5		156	219 217 210	

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	1,5	1,0	0	0	1,0	1,0

ICC-DIN 50914(EN 114,EN ISO 3651-2)-test: O.K.
"Anti-mixing test-O.K."
„Dimension test and surface defects test is sccomplished "

Manufacturer: JSC "DNEPROSPETSSTAL
Date: 16.06.09 Signed:
V.Rapaeva

Zaporozhye
Made in Ukraine.