94739 (9")

QMS Sertified

DNEPROSPETSSTAL,YUZHNOYE SHOSSE 81, ZAPOROZHYE 69008,UKRAINE

Contract No.: 07149
TECHN.PROTOCOL № 237-06 SPEC.№5734/P003307
„AD 2000-Merkblatt WO/TRD 100(DGRL)97/23/EG"
AD2000-Merkblatt W2, AD2000-Merkblatt W10
"DIN EN 10222-5,DIN EN 10088-3,DIN EN 10272,ASTM A 276,ASTM A 479,ASME SA-479"
DIN EN 10088-3,DIN EN 10222-5,DIN EN 10272,ASTM A182/A182M-05,ASME SA-182/SA-182M-04,ASTM A276-04,ASTM A 314-97(2002),ASTM A479/A479M-04,ASME SA-479/SA-479M-04,ASTM A484/A484M-05,AMS-QQ-S-763A-03 Cond.A,QQS-763F Cond.A,NACE MR 0175,AMS 5648K-02,AMS 5653F-02,ASTM A193/A193M-04c GR B8M,CL 1,ASME SA-193/SA-193M-04 GR B8M,CL 1 ASTM A320/A320M-03 GR B8M,CL 1, ASME SA-320/SA-320M-04 GR B8M,CL 1

EN10204/3.1
Sheets:6 Sheet: 4
QUALITY CERTIFICATE Nr.231156
PLANT ORDER № 8071495734

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: Electric furnace
СПОСОБ ВЫПЛАВКИ:Электродуговая печь
Round 9.00in/228.60 mm L=5.59m
Grade: 316/316L/1.4401/1.4404

QUANTITY:
(number of pcs) 1bund. Q-1880 kg

Delivery condition
Heat-treated (solution annealing 1010°C water 15minutes)
С термич.обраб.(закалка в воду 1010°С 15мин.)

ANALYSES, %	C	Si	Mn	P	S	Cr	Ni	Mo	Al	Cu	V	W	Ti	Co	Nb	N_2	Sn	B
REQUIRED	<.030	<1,00	1.20-2.00	<.045	.015-.030	16.50-18.00	10.00--13.00	2.00-2.50	<.10	<.40	<.10	<.20	<.15	<.40	<.20	<.10		
HEAT № 94739	.025	.53	1.39	.036	.024	16,85	10.00	2.03	.054	.23	.05	.08	.08	.073	.011	.027	.0068	.0013

DIN EN 10002-1,ASTM A 370

MECANICAL PROPERTIES	Yield Strength, N /mm²(ksi) R0.2% R1.0%		Tensile Strength, Rm, N /mm² (ksi)	Elongation A_5 % L	Q	in 2 inches (50mm) or 4D,min,% (ASTM A370) L	Reduction of area, Z % L	Q	Brinel Hardness HB	Impact strength, KV, J L	Q
REQUIRED	205	240	515-690	45	35	40	50		Max 215	100	60
EFFECTIVE	291 (42)	322 (47)	587 (85,5)	61	55	-	76		174	242 239 247	66 71 68
	-	-	-	-	-	58	-		-		
	295 (43)	326 (47,5)	589 (86)	60.5	56	-	75		174	242 239 247	66 71 68
	-	-	-	-	-	58	-		-		

Mechanical properties tested in state of delivery

US - testing	yes	Results: DIN EN 10228-4 type 1a;class 3:O.K. «ASME SA-388/SA-388M» «ASTM A388/A388M» «FBH 1/5"»

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	0.0	1.0	1.0

ICC-EN ISO 3651-2(EN 114,ASTM A262,method E)-test: O.K.
"Anti-mixing test-O.K."
„Dimension test and surface defects test is sccomplished "

Manufacturer: JSC DNEPROSPETSSTAL
Date: 23.03.10 Signed: V.Kravcova

Zaporozhye
Made in Ukraine.