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DSRB1303
CO26509 DS72921003 2007



DNEPROSPETSSTAL, YUZHNOYE SHOSSE 81, ZAPOROZHYE 69008, UKRAINE

Contract No.: 50005
TECHN. PROTOCOL № 210-06 SPEC № 1119/PO L30610
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
Cond. A; NACE MR 0175-2003; AMS 5648K-02; AMS 5653F-02; ASTM A193/A193M-04c GR B8M; CL1 (EXC PAR 6.3)
ASME SA-193/SA-193M-04GR B8M; CL1 (EXC PAR 6.3)

EN10204/3.1

Sheets: 9 Sheet: 4
QUALITY CERTIFICATE Nr. 241074
PLANT ORDER № 8023401119

CUSTOMER
„DSS INTERNATIONAL SA“
Switzerland

Commodity code RB6L0516/DS

PRODUCT DESCRIPTION
Bars and rods of corrosion-resistant (stainless) steel hot rolled, peeled on Landgraf line.
Прутки из коррозионно-стойких (нержавеющих) сталей горячекатаные обточенные на линии Ландграф.
STEEL MAKING PROCESS: EAF+AOD
СПОСОБ ВЫПЛАВКИ: Электродуговая печь+АКР
Round 5.250in/133.35 mm L=3.70-5.50m/12.13-18.03 ft
Grade: 316/F316/316L/F316L

QUANTITY: 1bund Q-4078 lb/1850 kg
(number of pcs) 1bund Q-1388 lb/630 kg

Delivery condition
solution annealed : 1900-2010° F (1040-1100° C) / water
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 № 95313	.020	.32	1.32	.036	.022	16.60	10.21	2.08	.069	.24	.05	.12	.014	.07	.026	.048		

MECHANICAL PROPERTIES	Yield Strength, Ksi(N/mm ²) Re (R _{e1})	Tensile Strength, Rm, Ksi (N/mm ²)	Elongation, A ₅ %	Reduction of area, Z %	Brinell Hardness HB	Impact strength, KV, J
REQUIRED	30(205)	75 (515)	45	50	140-223	100
EFFECTIVE	41.8(287)	83.8(576)	57	79	170	298

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
2.5 2.5 2.1 1.5 0.0 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: 18.67:1

Mechanical properties tested in state of delivery

US - testing	yes	Results: SEP 1921, 3/ Dd - O.K.
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Radiation free; mercury free. No Weld or Weld repair.

Manufacturer: JSC DNEPROSPETSSTAL
Date: 10.12.10 Signed:
V. Kapteva
Zaporozhye
Made in Ukraine.