

HT # 93129

63606

Sheets: 9
QUALITY CERTIFICATE EN10204/3.1 Nr.207670
 PLANT ORDER № 8071490685

Purchase order No.: 07149
 TECHN PROTOCOL № 210-06 SPEC.AN0685068603-AG
 -ASTM A182/A182M-03; ASME SA-182/SA-182M-04; ASTM A276-04; ASTM A479/A479M-04; ASTM SA-479/SA-479M-04; ASTM A478/A478M-03; AMS QQ-S-783A-03; AMS QQ-S-783A-03; AMS 567H-01; ASTM A193/A193M-04; GR BB, CL1 (EXC PAR 6.3)
 ASME SA-193/SA-193M-04 GR BB, CL1 (EXC PAR 6.3)
 NACE MR0175

JSC DNEPROPETSSTAL
 YUZHNOYE SHOSSE
 69008, ZAPOROZHYE
 UKRAINE

QUANTITY:
 (number of pcs) 1bund Q-5049 lb/2290kg

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

PRODUCT DESCRIPTION
 Rods of corrosion-resistant (stainless) steel hot rolled peeled on "Landgraf" line. Прутки из коррозионностойких (нег.-касиоучу) сталей горячекатаные облученные на линии «Ландграф».

STEEL MAKING PROCESS: EAF+AOD
ШОСОБ ВЫПЛАВКИ: Электродуговая печь+АКР
 Round 6,50in/165,10 mm L=3,80-5,80m
 Grade: 304/F304L/304L/F304L

CUSTOMER: DSS INTERNATIONAL SA
 Suisse: tui::

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	18,00-20,00	8,00-10,50	<.30	<.10	<.40	<.10	<.20	<.15	<.40	<.20	<.10
CAST № 93129	.017	.55	1.59	.035	.026	18.85	8.20	2.5	.064	.28	.04	.07	.008	.073	.01	.065

TECHNICAL REQUIREMENTS:
 Macrostructure - GOOD
 GRAIN SIZE : 5 to ASTM E 112
 Nonmetallic inclusions ASTM E 45 (Method A)
 A thin thick thin thick thin thick thin thick
 3.0 2.0 2.0 1.5 0.0 0.0 1.0 1.0
 ICC-ASTM A262-02a (Method F)-test: O.K.
 Dimension/surface defects test, anti-mixing test - O.K.
 Ratio of reduction-12.6

NOTE:
 The customer confirms that the above stated requirements to chemical composition, dimensions, mechanical properties, packing, marking and inspection certificate comply with the specification SS1 Rev3.

MECANICAL PROPERTIES	Yield Strength, Ksi(N/mm ²)	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	46(316)	85 (579)	61	76.5	167	247

Heat treatment (specimen) Delivery condition: In state of delivery

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

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

Manufacturer: JSC DNEPROPETSSTAL
 Date: 18.02.08 Signed: [Signature]
 Zaporozhye
 Made in Ukraine.

