



91863

	<b>JSC DNEPROSPETSSTAL</b> <b>YUZHNOYE SHOSSE</b> <b>69008, ZAPOROZHYE</b> <b>UKRAINE</b>		Purchase order No.: 26023 TECHN.PROTOCOL № 210-06 SPEC.№621917683-000 OIP ASTM A182/A182M-05; ASME SA-182/SA-182M-04; ASTM A276-04; ASTM A329/A329M-04; ASTM SA-192/SA-192M-04; ASTM A484/A484M-05; ASME SA-192/SA-192M-04; ASTM A193/A193M-04; ASTM A329/A329M-04; ASTM A484/A484M-05; ASTM A193/A193M-04; ASTM A329/A329M-04; ASTM A484/A484M-05; ASME SA-192/SA-192M-04; ASME SA-321/SA-321M-04; ASTM A193/A193M-04; GR. BB, CL. I. (EXC. PAR 6.3) ASME SA-192/SA-192M-04; GR. BB, CL. I. (EXC. PAR 6.3)	Sheets: 11 <span style="float: right;">Sheet: 11</span> <b>QUALITY CERTIFICATE EN10204/3.1.B. Nr.188788</b> PLANT ORDER № 8260236219
<b>CUSTOMER:</b> Customer's item number: 11130505			<b>PRODUCT DESCRIPTION</b> Rods of stainless steel, hot rolled, peeled. Прутки из нержавеющей стали горячекатаные, обточенные. <b>STEEL MAKING PROCESS:</b> EAF+AOD <b>СПОСОБ ВЫПЛАВКИ:</b> Электродуговая печь+АКР Round 3.00in/76.20 mm L=3.1-5.8m Grade: 304/F304L/304L/F304L	<b>QUANTITY:</b> 1 pack Q=44091b/2000kg (number of pcs)  <b>Delivery condition</b> solution annealed : 1900-2010° F(1040-1100° C)/water термообработка: закатка в воду

ANALYSES, %	C	Si	Mn	P	S	Cr	Ni	Mo	Al	Cu	V	W	Ti	Co	Nb	N <sub>2</sub>		
<b>REQUIRED</b>	<.030	<1,00	1.25-2.00	<.040	.020-.030	18.00-20.00	8.00-10,50	<.30	<.10	<.40	<.10	<.20	<.15	<.10	<.20	<.10		
<b>CAST № 91863</b>	.024	.53	1.55	.038	.026	18.37	8.66	.26	.050	.29	.04	.06	.012	.059	.01	.075		

MECHANICAL PROPERTIES	Yield Strength, Ksi(N/mm <sup>2</sup> ) Re (R <sub>s</sub> )	Tensile Strength, Rm,ksi (N/mm <sup>2</sup> )	Elongation A <sub>5</sub> %	Reduction of area, Z %	Brinell Hardness HB	Impact strength, KV, J
<b>REQUIRED</b>	30(205)	75 (515)	45	50	140-223	100
<b>EFFECTIVE</b>	43.0(295)	85.4(586)	61	75	170	273

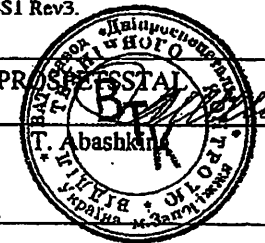
Heat treatment (specimen) Delivery condition: In state of delivery

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

**TECHNICAL REQUIREMENTS:**  
 Macrostructure - GOOD.  
 GRAIN SIZE: 5 to ASTM E 112-96  
 Nonmetallic inclusions ASTM E 45-95 (Method A)  

	A	B	C	D
thin	2.5	2.0	1.5	1.0
thick	2.0	1.5	1.0	0.0
thin	1.5	1.0	0.0	0.0
thick	1.0	0.0	0.0	1.0

 ICC-ASTM A262-02a(Method E)-test: O.K.  
 „Dimension/surface defects test, anti-mixing test - O.K.“  
 Ratio of reduction - >20  
**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.



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

This report is a copy of original mill certificate and verifies that the product meets the requirements as originally ordered

Manufacturer: JSC DNEPROSPETSSTAL  
 Date: 22.10.06 Signed: *[Signature]*  
 Zaporozhye  
 Made in Ukraine.

DATE 01/23/06 VERIFIED BY: *[Signature]*

LOT. 00415579

ORD.NO 001/1058 P.O.#05636CV

*chess*