





C224524


PrJSC DNIPROSPETSSTAL, YUZHNOYE SHOSSE 81, 69008 ZAPOROZHYE, UKRAINE

	Contract No.: 20002 TECHN.PROTOCOL № 390-11 SPEC.№ 0111/PO44618 DIN EN 10088-3-05, DIN EN 10272-08, DIN EN 10222-5-00, ASTM A182/A182M-10; ASME SA-182/SA-182M-10; ASTM A276-10; ASTM A314-08, ASTM A479/A479M-10; ASME SA-479/SA-479M-10; ASTM A484/A484M-10; AMS-QQ-S-763B-06 Cond.A: AMS 5648K-07; AMS 5653F-07; ASTM A193/A193M-10 GR B8M, CL1; ASME SA-193/SA-193M-10 GR B8, CL 1; ASTM A320/A320M-08 GR B8M, CL 1; ASME SA-320/SA-320M-10 GR B8, CL1; NACE MR 0175-03; NACE MR 0103-10										Sheets: 4 Sheet: 4 INSPECTION CERTIFICATE EN10204/3.1 Nr.336960 PLANT ORDER № 8014900111																																																																				
	 GMS Certified		CUSTOMER DSS INTERNATIONAL SA Switzerland										PRODUCT DESCRIPTION Bars and rods of corrosion-resistant (stainless) steel forged, peeled. Прутки из коррозионноустойчивых (нержавеющих) сталей кованные, обточенные. STEEL MAKING PROCESS: EAF+AOD СПОСОБ ВЫПЛАВКИ: Электродуговая печь+АКР Round 15.000in/381.00 mm L= 8.115 ft/2.475 m; Grade: 316/316L/1.4401/1.4404		QUANTITY: 1bund Q-5057 lb/2294 kg (number of pcs)																																																																
ANALYSIS, %																																																																															
	C	Si	Mn	P	S	Cr	Ni	Mo	Al	Cu	V	W	Ti	Co	Nb	N	Sn	B																																																													
REQUIRED	<.030	<1,00	1.20-2.00	<.040	.015-.030	16.50-18.00	10.00-13.00	2.00-2.50	<.10	<.40	<.10	<.20	<.15	<.40	<.20	<.10																																																															
CAST № A06284	.018	.45	1.29	.040	.025	16,78	10.30	2.06	.076	.33	.05	.07	.005	.12	.011	.028	.011	.0022																																																													
DIN EN 10002-1, ASTM A370-09																																																																															
MECHANICAL PROPERTIES	Yield Strength, (N/mm²) R0.2% R 1.0%		Tensile Strength, Rm, (N/mm²)	Elongation		Reduction of area, 7. % L	Brinell Hardness HIB	Impact strength, KV, J		TECHNICAL REQUIREMENTS: Macrostructure – GOOD GRAIN SIZE : 5 to ASTM E 112-96(2004) Nonmetallic inclusions ASTM E 45-05 (Method A) <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="text-align: center;">A</td> <td style="text-align: center;">B</td> <td style="text-align: center;">C</td> <td style="text-align: center;">D</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td style="text-align: center;">thin</td> <td style="text-align: center;">thick</td> <td style="text-align: center;">thin</td> <td style="text-align: center;">thick</td> <td style="text-align: center;">thin</td> <td style="text-align: center;">thick</td> <td style="text-align: center;">thin</td> <td style="text-align: center;">thick</td> <td style="text-align: center;">thin</td> <td style="text-align: center;">thick</td> <td style="text-align: center;">thin</td> <td style="text-align: center;">thick</td> <td style="text-align: center;">thin</td> <td style="text-align: center;">thick</td> <td style="text-align: center;">thin</td> <td style="text-align: center;">thick</td> <td style="text-align: center;">thin</td> <td style="text-align: center;">thick</td> <td style="text-align: center;">thin</td> <td style="text-align: center;">thick</td> </tr> <tr> <td style="text-align: center;">3.0</td> <td style="text-align: center;">2.0</td> <td style="text-align: center;">2.0</td> <td style="text-align: center;">1.0</td> <td style="text-align: center;">0.0</td> <td style="text-align: center;">0.0</td> <td style="text-align: center;">1.0</td> <td style="text-align: center;">1.0</td> <td style="text-align: center;">3.0</td> <td style="text-align: center;">2.0</td> <td style="text-align: center;">2.0</td> <td style="text-align: center;">1.0</td> <td style="text-align: center;">0.0</td> <td style="text-align: center;">0.0</td> <td style="text-align: center;">1.0</td> <td style="text-align: center;">1.0</td> <td style="text-align: center;">3.0</td> <td style="text-align: center;">2.0</td> <td style="text-align: center;">2.0</td> <td style="text-align: center;">1.0</td> <td style="text-align: center;">0.0</td> <td style="text-align: center;">0.0</td> </tr> </table> ICC-ASTM A262-08 (practice E)-tcst: O.K. Dimension/surface defects test, anti-mixing test – OK We acknowledge that the delivered products conform to the requirements of the order/Подтверждаем, что поставленная продукция соответствует требованиям заказа Ratio of reduction-6.3:1									A	B	C	D																thin	thick	thin	thick	thin	thick	thin	thick	thin	thick	thin	thick	thin	thick	thin	thick	thin	thick	thin	thick	3.0	2.0	2.0	1.0	0.0	0.0	1.0	1.0	3.0	2.0	2.0	1.0	0.0	0.0	1.0	1.0	3.0	2.0	2.0	1.0	0.0	0.0
	A	B		C	D																																																																										
	thin	thick	thin	thick	thin	thick	thin	thick	thin										thick	thin	thick	thin	thick	thin	thick	thin	thick	thin	thick																																																		
3.0	2.0	2.0	1.0	0.0	0.0	1.0	1.0	3.0	2.0	2.0	1.0	0.0	0.0	1.0	1.0	3.0	2.0	2.0	1.0	0.0	0.0																																																										
REQUIRED	205	240	515-690	45 35	40	50	140-217	100	60																																																																						
EFFECTIVE	279	304	549	58 48	57	73	163	190 190 190	66 66 66																																																																						
Mechanical properties tested in state of delivery																																																																															
US - testing		yes	Results: ASTM A388/A388M-FBHI/5"; EN 10228-4 type 1a; class 3:OK																																																																												
Radiation free; mercury free. No Weld or Weld repair.																																																																															
Manufacturer: PrJSC DNIPROSPETSSTAL Date: 16.08.18 Manager of quality assurance department - V. Kapaieva Signed:  Zaporozhye Made in Ukraine.																																																																															

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PrJSC DNIPROSPETSSTAL, YUZHNOYE SHOSSE 81, 69008 ZAPOROZHYE, UKRAINE

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	CUSTOMER DSS INTERNATIONAL SA Switzerland	PRODUCT DESCRIPTION Bars and rods of corrosion-resistant (stainless) steel forged, peeled.Прутки из коррозионностойких (нержавеющих) сталей кованные, обточенные. STEEL MAKING PROCESS: EAF+AOD СПОСОБ ВЫПЛАВКИ:Электродуговая печь+АКР Round 15.000in/381.00 mm L=8.213ft/2.505m Grade: 316/316L/1.4401/1.4404	QUANTITY: (number of pcs) 1bund Q-5106 lb/2316 kg Delivery condition solution annealed :1940° F(1060° C)water 30minutes термообработка:закалка в воду
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ANALYSIS, %	C	Si	Mn	P	S	Cr	Ni	Mo	Al	Cu	V	W	Ti	Co	Nb	N	Sn	B
REQUIRED	<.030	<1.00	1.20-2.00	<.040	.015-.030	16.50-18.00	10.00-13.00	2.00-2.50	<.10	<.40	<.10	<.20	<.15	<.40	<.20	<.10		
CAST № A06284	.018	.45	1.29	.040	.025	16,78	10.30	2.06	.076	.33	.05	.07	.005	.12	.011	.028	.011	.0022

DIN EN 10002-1,ASTM A370-09

MECHANICAL PROPERTIES	Yield Strength, (N/mm ²) R0.2% R 1.0%		Tensile Strength, Rm, (N /mm ²)	Elongation		Reduction of area, Z % L	Brinell Hardness HB	Impact strength, KV, J		
	L	Q		A, % L Q	In 2 inches (50mm) or 4D,min,% L			L	Q	
REQUIRED	205	240	515-690	45	35	40	50	140-217	100	60
EFFECTIVE	279 281	304 306	549 551	59	48	57	73	163 163	190 190 190 187 187 187	66 66 66 65 65 65

TECHNICAL REQUIREMENTS:
 Macrostructure – GOOD
 GRAIN SIZE : 5 to ASTM E 112-96(2004)
 Nonmetallic inclusions ASTM E 45-05 (Method A)


A	B	C	D
thin	thick	thin	thick
3.0	2.0	2.0	1.0
0.0	0.0	0.0	1.0

 ICC-ASTM A262-08 (practice E)-test: O.K.
 Dimension/surface defects test, anti-mixing test – OK
 We acknowledge that the delivered products conform to the requirements of the order/Подтверждаем, что поставленная продукция соответствует требованиям заказа
 Ratio of reduction-6.3:1

Mechanical properties tested in state of delivery

US - testing	yes	Results: ASTM A388/A388M-FBH1/5";EN 10228-4 type 1a;class 3:OK
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Radiation free; mercury free. No Weld or Weld repair.

Manufacturer:PrJSC DNIPROSPETSSTAL
 Date: 09.08.18 Manager of quality assurance department - V. Kapaieva
 Signed: 
 Zaporozhye
 Made in Ukraine.

ANS