



C229099

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, AD2000-Merkblatt W2; AD 2000-Merkblatt W10; 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-10GR 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: 1 INSPECTION CERTIFICATE EN10204/3.1 Nr.337468 PLANT ORDER № 8014900111
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 GMS Certified	CUSTOMER DSS INTERNATIONAL SA Switzerland	PRODUCT DESCRIPTION Bars and rods of corrosion-resistant (stainless) steel hot rolled, peeled on Landgraf line. Прутки из коррозионноустойчивых (нержавеющих) сталей горячекатаные, обточенные на линии Ландграф. STEEL MAKING PROCESS: EAF+AOD СПОСОБ ВЫПЛАВКИ: Электродуговая печь+АКР Round 6.250in/158.75 mm L=5.640m/18.492ft Grade: 316/316L/1.4401/1.4404	QUANTITY: (number of pcs) 1bund Q-4048 lb/1836 kg Delivery condition solution annealed :1900°F(1040°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 № A06341	.020	.43	1.29	.040	.027	16,87	10.20	2.03	.064	.29	.05	.06	.005	.12	.01	.026	.0108	.0025

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	
	205	240		A5% L Q	In 2 inches (50mm) or 4D,min,% L			L	Q
REQUIRED	205	240	515-690	45 -	40	50	140-217	100	-
EFFECTIVE	280 282	317 329	563 567	62 - 61 -	57 57	77 77	167 167	230 230 230 226 226 226	-

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 thin thick thin thick
 2.5 1.5 1.5 1.0 0.0 0.0 1.0 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
 Ratio of reduction-15.1:1

Mechanical properties tested in state of delivery

US - testing	yes	Results: ASTM A388/A388M-FBH1/8"; EN 10308 type 1a; class 3:OK
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Radiation free; mercury free. No Weld or Weld repair.

Manufacturer: PrJSC DNIPROSPETSSTAL
 Date: 31.08.18 **Manager of quality assurance department - V. Kapaieva**
 Signed: 
 Zaporozhye
 Made in Ukraine.

P.O. # 5369
 Part # D3 - 702201
 Desc.: CPA MIXER PROTOTYPE
 4 NPS UPSTREAM FLANGE

INS March 18, 2020