

PrJSC DNIPROSPETSSTAL, YUZHNOYE SHOSSE 81, 69008 ZAPOROZHYE, UKRAINE



Contract No.: 20002
TECHN. PROTOCOL № 390-11 SPEC. № 176/PO52377
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-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, CL 1; NACE MR 0175-03; NACE MR 0103-10

INSPECTION CERTIFICATE EN10204/3.1 N°:376539
PLANT ORDER № 8014904176



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
ПРОЦЕСС ВЫПЛАВКИ: Электродуговая печь+AOP
Round 18.750m/476.25 mm L=10.836 ft/3.305m
Grade: 316/316L/1.4401/1.4404

QUANTITY:
(number of pcs) **1bund Q-10600lb/4808 kg**
Delivery condition
solution annealed : 1940°F(1060°C) water 28minutes
термообработка: закалка в воду

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 № A10688	.020	.44	1.48	.040	.025	16.79	10.22	2.06	.073	.35	.06	.04	.005	.14	.01	.035	.011	.0024

DIN EN 10002-1-ASTM A370-09

MECHANICAL PROPERTIES	Yield Strength, (N/mm ²) R _{0.2%} R 1.0%	Tensile Strength, (N/mm ²) R _m	Elongation		Reducti on of area, Z % L	Brinell Hardness HB	Impact strength, KV, J		
			A % L	In 2 inches (50mm) or 4D, min. % L			L	Q	
REQUIRED	205	240	515-690	45-35	40	50	140-217	100	60
EFECTIVE	290	321	560	61-54	60	79	163	212 212 212	63 63 63

Mechanical properties tested in state of delivery

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

TECHNICAL REQUIREMENTS:
Macrostructure - GOOD
GRAIN SIZE : 5 to ASTM E 112-96(2004)
Nonmetallic inclusions ASTM E 45-05 (Method A)
A thin thick thin thick thin thick thin thick
3.0 2.0 2.0 1.0 0.0 0.0 1.0 1.0
ICC-ASTM A262-08 (practice E)-test: OK.
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-7.5:1
Date: 31.12.2011
Mincer of quality assurance department
- V. Karavca
Zaporozhye Signed:
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