

PIJSC DNIPROSPETSSTAL, YUZHINOYE SHOSSE 81, 69008 ZAPOROZHYYE, UKRAINE



Contract No.: 20002
 TECHN.PROTOCOL № 390-11 SPEC.№3642/POS1840
 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, CL 1; 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 №.374318
 PLANT ORDER № 80: 4903642



CUSTOMER
 DSS INTERNATIONAL
 SA Switzerland

PRODUCT DESCRIPTION
 Bars and rods of corrosion-resistant (stainless) steel forged, peeled, прутки из коррозионно-стойких (нержавеющих) сталей кованые, обточенные.
STEEL MAKING PROCESS: EAF+AOD
СТОСОБ ВЫПЛАВКИ: Электропудговая печь+AOP
 Round 13.000mm/330.20 mm L=11.000 (R/3.290m)
 Grade: 316/316L/1.4401/1.4404

QUANTITY:
 (number of pcs) **Пилл Q-5071 lb/2300 kg**

Delivery condition
 solution annealed :1922° F(1050° C) water 30minutes
 термообработка: закалка в воду

ANALYSIS, %	C	SI	Mn	P	S	Cr	Ni	Mo	Al	Cu	V	W	Ti	Co	Nb	N	Sn	B
REQUIRED	<0.30	<1.00	1.20-2.00	<0.040	.015-.030	16.50-18.00	10.00-13.00	2.00-2.50	<10	<.40	<.10	<.20	<.15	<.40	<.20	<.10		
CAST № A10353	.023	.43	1.33	.039	.025	16.76	10.22	2.03	.06	.23	.05	.04	.006	.13	.01	.027	.0077	.0022

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		Reduction of area, Z % L	Brinell Hardness HB	Impact strength, KJ, J	
			A % L Q	In 2 inches (50mm) or 4D min, % L			L	Q
REQUIRED	205	240	45-35	40	50	140-217	100	60
EFFECTIVE	288	334	63-52	60	79	167	247 247 247	61 61 61

MECHANICAL PROPERTIES TESTED IN STATE OF DELIVERY

US - testing **yes** **Results:** ASTM A388/A388M-FBH1/5"; EN 10228-4 type 1a; class 3.0K

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 B C D
 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: 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-6:1

Date: 03.10.2014 Manager of quality assurance department
 - V. Kapelova Signed:
 Zaporozhye
 Melted and Produced in Ukraine.
 MELTED and MANUFACTURED PJSC "Dniprospechstal"
 Phone number +380612834255
 e-mail: info@dss.com.ua
 http://www.dss-ua.com

P.O. # 6087 Part # 10-FOE-40 Desc: 10" CPB SOE S-40 316 S/S

M/S