

HT# A01105

C 115588

PJSC DNIPROSPETSSTAL, YUZHNOYE SHOSSE 81, 69008 ZAPOROZHYE, UKRAINE



Contract No.: 20002
 TECH.NI.PROTOCOL № 390-11 SPEC.№4468/P033536-ED
 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

Sheets: 5
 INSPECTION CERTIFICATE EN10204/3.1 Nr.288190
 PLANT ORDER № 8014904468



CUSTOMER
DSS INTERNATIONAL
 SA Switzerland

PRODUCT DESCRIPTION
 Bars and rods of corrosion-resistant (stainless) steel forged, peeled, lapped and
 kopposиoиoцpoбикиx (яepкaвepoиyиx) cтaлeй кoвaнyиe, oбpoчyвaнyиe.
STEEL MAKING PROCESS: EAF+AOD
ЧIОCOC BИПIИABКИ: Зaкpиcтaлiзaцiя зaкaвyкa нeчyгyнoк
 Round 18.750in/476.25 mm L=2.805m/9.197ft
 Grade: 316/316L/1.4401/1.4404

QUANTITY:
 (number of pcs) 1bund Q-8986 lb/4076 kg

Delivery condition
 solution annealed : 1940° F(1060° C) water 42minutes
 зepмooбпaтoвyкa:зaкaвyкa в вoдy

ANALYSIS, %	C	Si	Mn	P	S	Cr	Ni	Mo	Al	Cu	V	W	Ti	Co	Nb	N ₂	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 № A01105	.026	.39	1.31	.038	.027	16.85	10.25	2.04	.062	.24	.04	.12	.005	.08	.01	.035	.011	.001

DIN EN 10002-1, ASTM A370-09

MECHANICAL PROPERTIES	Yield Strength, (N/mm ²) R _{0.2%} R 1.9%	Tensile Strength, R _m , (N/mm ²)	Elongation		Reduction of area, Z, %	Brinell hardness HB	Impact strength, KV, J	
			A ₅ % L	In 2 inches (50mm) or 4D, min, % L			L	Q
REQUIRED	205	240	45-35	40	50	140-223	100	60
EFFECTIVE	297 290	338 330	60-55 60-55	59 59	79 79	167 167	267 267 270 263 270	67 67 65 65

Mechanical properties tested in state of delivery

US - testing yes Results: ASME SA-388/SA-388M-10/ASTM A 388/A 388M-09)-
 FBH1/5" EN 10228-4 type Ia, class 3: OK

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

TECHNICAL REQUIREMENTS:
 Microstructure - 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
 B thin thick thin thick thin thick thin thick
 C thin thick thin thick thin thick thin thick
 D thin thick thin thick thin thick thin thick
 ICC-ASTM A262-08 (practice E)-test: O.K.
 Dimension/surface defects test, anti-mixing test - OK

Manufacturer: PJSC DNIPROSPETSSTAL
 Date: 16.09.14 Manager of quality assurance department - V. Kapateva
 Signed:

Zaporozhye
 Made in Ukraine.