

# A00986 - 3.0 in

C110843

## PJSC DNIPROSPETSSTAL, YUZHNOYE SHOSSE 81, 69008 ZAPOROZHYE, UKRAINE



Contract No.: 20002  
 TECFIN.PROTOCOL № 390-11 SPEC.№ 3734/P033051-ED  
 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 5655F-07, ASTM A193/A193M-10, GR B8M, CL1/EXC PAR 7.2), ASME SA-193/SA-193M-10, GR B8, CL 1/EXC PAR 7.3), NACE MR 0175-03, NACE MR 0103-10

INSPECTION CERTIFICATE EN102043 1 №286450  
 PLANT ORDER № 8014905754

CUSTOMER

**PRODUCT DESCRIPTION**  
 Bars and rods of corrosion-resistant (stainless) steel hot rolled, peeled on 1 and/or 2 line, Ipyтчи из коррозионностойких (нержавеющих) сталей горячекатаные, обработанные на линии Длантраф

**QUANTITY:**  
 (number of pcs) 1bund Q-3056 1b/1386 kg  
 1bund Q-1279 1b/580 kg  
 1bund Q-1358 1b/616 kg



DIN CERTIFIED

**STEEL MAKING PROCESS: EAF+AOD**  
**СТОКОБ ВПЦЛАВКН:** Электродуговая печь - ACP  
 Round 3,000mm/76.20 mm L=5,500mm/18.033ft L=3,950mm/12.951ft L=5,560mm/18.230ft  
 Grade: 316/316L/1.4401/1.4404

**Delivery condition:**  
 solution annealed : 1900-2010°C (1100-1100°C) / water  
 tempering/отпуск/отжарка в солю

ANALYSIS %	C	Si	Mn	P	S	Cr	Ni	Mo	Al	Cu	V	W	Ti	Co	Nb	N	Sb	Bi
REQUIRED	0.30	0.06	1.20-2.00	<0.030	0.030	16.50-18.00	10.00-13.00	2.50-3.00	0.010	0.010	0.10-0.20	0.010-0.020	0.010-0.020	0.010-0.020	0.010-0.020	0.010-0.020	0.010-0.020	0.010-0.020
ACTUAL	0.17	0.02	1.12	0.037	0.025	17.12	10.15	2.30	0.011	0.011	0.14	0.010	0.010	0.010	0.010	0.010	0.010	0.010

DIN EN 10002-1, ASTM A276-09

MECHANICAL PROPERTIES	Yield Strength (MPa) R <sub>0.2</sub> R <sub>0.01</sub>	Tensile Strength (MPa) R <sub>m</sub>	Elongation		Reduction of area, Z %	Brinell Hardness HB	Impact strength	
			A % (50mm or 4D <sub>min</sub> %)	In 2 inches (50mm) or 4D <sub>min</sub> %			KV, J	Q
REQUIRED	205	515-700	40	40	50	140-217	100	
EFFECTIVE	303 301	327 324	567 563	60 60	61 60	163 163	246 235 245 234 231 258	

Mechanical properties tested in state of delivery

**TECHNICAL REQUIREMENTS:**  
 Macrostructure -- (A0.01)  
 GRAIN SIZE: 5 to ASTM E112-96(2002)  
 Nonmetallic inclusions: ASTM E 45-05 (Method A)  
 A thin B thin C thin D thin  
 2.0 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

EN - Testing: yes Results: ASME SA-388/SA-388M-10(ASME A 388/A 388M-09)-FBH18; EN 10308 type 1, class 3-OK

radiation free, mercury free, No Weld or Weld repair

Manufacturer: PJSC DNIPROSPETSSTAL  
 Date: 28.07.14 Manager of quality assurance department: V. Kapateva  
 Signed:   
 Zaporozhye  
 Made in Ukraine