

25 pcs 228379

PrJSC DNIPROSPETSSTAL, YUZHNOYE SHOSSE 81, 69008 ZAPOROZHYE, UKRAINE

Contract No.: 20002
 TECHN.PROTOCOL № 390-11 SPEC.№1183/PO45174
 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

Sheets: 2 Sheet: 1
INSPECTION CERTIFICATE EN10204/3.1 Nr.342863
 PLANT ORDER № 8014901183



CUSTOMER
DSS INTERNATIONAL
 SA Switzerland

PRODUCT DESCRIPTION
 Bars and rods of corrosion-resistant (stainless) steel forged, peeled. Прутки из коррозионноустойчивых (нержавеющих) сталей кованные, обточенные.
STEEL MAKING PROCESS: EAF+AOD
СПОСОБ ВЫПЛАВКИ: Электродуговая печь+АКР
 Round 11.000in/279.40 mm L=15.311 ft/4.670m L=14.049 ft/4.285m
Grade: 316/316L/1.4401/1.4404

QUANTITY: 1bund Q-5150 lb/2336 kg
 (number of pcs) 1bund Q-4735 lb/2148 kg

Delivery condition
 solution annealed : 1922° F(1050° C) water 25minutes
 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 № A06845 | .027 | .41 | 1.34 | .034 | .026 | 16,91 | 10.26 | 2.07 | .072 | .37 | .05 | .03 | .005 | .13 | .014 | .024 | .0092 | .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 | |
|-----------------------|--|-----|--|-------------------------|---------------------------------------|-----------------------------|---------------------|------------------------|----------|
| | L | Q | | A ₅ % L Q | In 2 inches (50mm) or 4D, min, % L | | | L | Q |
| REQUIRED | 205 | 240 | 515-690 | 45 35 | 40 | 50 | 140-217 | 100 | 60 |
| EFFECTIVE | 304 | 347 | 562 | 60 52 | 58 | 78 | 163 | 206 206 206 | 64 64 64 |

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 3.0 2.0 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-7.4:1

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.

Manufacturer: PrJSC DNIPROSPETSSTAL
 Date: 26.02.19 **Manager of quality assurance department - V. Kapaieva**
 Signed:
 Zaporozhye
 Made in Ukraine.

ANS