

PO 1577

DS64385007

94588

ASA PO 76189 W05502 CPA 16 W10 STD

DSRB 0429

 **DNEPROSPETSSTAL, YUZHNOYE SHOSSE 81, ZAPOROZHYE 69008, UKRAINE**

Contract No.: 07234
 TECHN. PROTOCOL № 210-06 SPEC. № 4797/PO L27202
 „ASTM A182/A182M-05; ASME SA-182/SA-182M-04; ASTM A276-04;
 ASTM A479/A479M-04; ASTM SA-479/SA-479M-04; ASTM A484/A484M-05;
 AMS-QQ-S-763A-03 Cond. A; NACE MR 0175-2003; AMS 5639H-02; AMS 5647H-02;
 ASTM A193/A193M-04c GR B8, CL1; ASME SA-193/SA-193M-04GR B8, CL1

EN10204/3.1
 Sheets: 5 Sheet: 3
QUALITY CERTIFICATE Nr. 229730
 PLANT ORDER № 8072344797

| | | |
|--|--|---|
| CUSTOMER „DSS INTERNATIONAL SA“ Switzerland Commodity code RB4L1600/DS | PRODUCT DESCRIPTION Bars and rods of corrosion-resistant (stainless) steel forged peeled. Прутки из коррозионностойких (нержавеющих) сталей кованы, обточенные. STEEL MAKING PROCESS: EAF+AOD СПОСОБ ВЫПЛАВКИ: Электродуговая печь+АКР Round 16.00in/406.40mm L=13.90 ft/ 4.24m Grade: 304/F304/304L/F304L | QUANTITY: (number of pcs) 1bund. Q-9806 lb/4448 kg Delivery condition solution annealed: 1900-2010° F(1040-1100° C)/water термообработка: закалка в воду |
|--|--|---|

| ANALYSES, % | C | Si | Mn | P | S | Cr | Ni | Mo | Al | Cu | V | W | Ti | Co | Nb | N ₂ | | |
|---------------------|-------|-------|-----------|-------|-----------|-------------|------------|------|------|------|------|------|------|------|------|----------------|--|--|
| REQUIRED | <.030 | <1.00 | 1.25-2.00 | <.040 | .020-.030 | 18.00-20.00 | 8.00-10.50 | <.30 | <.10 | <.40 | <.10 | <.20 | <.15 | <.40 | <.20 | <.10 | | |
| HEAT № 94588 | .026 | .35 | 1.61 | .033 | .028 | 18.66 | 8.25 | .19 | .068 | .22 | .05 | .05 | .016 | .065 | .010 | .063 | | |

| MECHANICAL PROPERTIES | Yield Strength, KSI(N/mm ²) Re (R _{0.2}) | Tensile Strength, Rm, ksi (N/mm ²) | Elongation A ₅ % | Reduction of area, Z % | Brinell Hardness HB | Impact strength, KV, J |
|-----------------------|---|--|-----------------------------|------------------------|---------------------|------------------------|
| REQUIRED | 30(205) | 75(515) | 45 | 50 | 140-223 | 100 |
| EFFECTIVE | 45.0(311) | 82.9(572) | 61 | 77 | 167 | 260 |

TECHNICAL REQUIREMENTS:
 Macrostructure – GOOD
GRAIN SIZE: 5 to ASTM E 112
 Nonmetallic inclusions ASTM E 45 (Method A)


| | | | |
|------|-------|------|-------|
| A | B | C | D |
| thin | thick | thin | thick |
| 2.0 | 2.0 | 2.0 | 1.0 |
| 0.0 | 0.0 | 0.0 | 1.0 |

 ICC-ASTM A262-02a (practice E)-test: O.K.
 „Dimension /surface defects test, anti-mixing test-O.K.“
 Ratio of reduction-5.4:1

Mechanical properties tested in state of delivery

US - testing yes Results: SEP 1921,3/Cc-O.K.

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

Manufacturer: JSC DNEPROSPETSSTAL
 Date: 04.02.10 Signed: 
 V. Kapaicva
 Zaporozhye
 Made in Ukraine.

5/27/2010

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