

RYECAL PO#:705663 SO#:HX8215

MTR#:DSRB1804.GII

RB6L0832 Bundle:DS79604004 Heat#:96372

DS79604004

96372.

DSRB1804

DNIPROSPETSSTAL, YUZHNOYE SHOSSE 81, ZAPOROZHYE 69008, UKRAINE



GMS Certified

Contract No.: 50005

EN10204/3.1

TECHN.PROTOCOL № 210-11 SPEC.№3213/PO L3228:
 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-10GR B8M,CL 1; ASTM A320/A320M-08GR B8M,CL 1; ASME SA-320/SA-320M-10 GR B8M,CL 1; NACE MR 0175-03; NACE MR 0103-10

Sheets: 11 Sheet: 8
QUALITY CERTIFICATE Nr.248126
 PLANT ORDER № 8023403213

CUSTOMER
 „DSS INTERNATIONAL SA“
 Switzerland
 Commodity code RB6L0832/DS

PRODUCT DESCRIPTION
 Bars and rods of corrosion-resistant (stainless) steel forged, peeled.
 Прутки из коррозионностойких (нержавеющих) сталей кованые, обточенные.
STEEL MAKING PROCESS: EAF+AOD
СПОСОБ ВЫПЛАВКИ: Электродуговая печь+АКР
 Round 8.500in/215.90 mm L=4.58m/15.02 ft
 Grade: 316/F316/316L/F316L

QUANTITY: 1bund Q-3064 1b/1390 kg
 (number of pcs)

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 | 16.00-18.00 | 10.00-14.00 | 2.00-3.00 | <.10 | <.40 | <.10 | <.20 | <.15 | <.40 | <.20 | <.10 | | |
| FAT № 96372 | .030 | .33 | 1.38 | .034 | .025 | 16.68 | 10.14 | 2.03 | .046 | .24 | .04 | .09 | .08 | .08 | .01 | .029 | | |

| MECHANICAL PROPERTIES | Yield Strength, Ksi(N/mm ²) Re (R _{eL}) | 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 | 44.8(308) | 84.5(581) | 56 | 79 | 170 | 266 |

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 - O.K.“
 Ratio of reduction-8.6:1

Mechanical properties tested in state of delivery

US - testing yes Results: SEP 1921,group 3/class Cc - OK

Manufacturer: PJSC DNIPROSPETSSTAL
 Date: 05.06.11 Signed: *[Signature]*

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

Zaporozhye
 Made in Ukraine.

