



ИТ# A05318

C200708

10700


PrJSC DNIPROSPETSSTAL, YUZHNOYE SHOSSE 81, 69008 ZAPOROZHYE, UKRAINE

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|  | Contract No.: 20002 TECHN.PROTOCOL № 390-11 SPEC.№6708/P042154-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-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,CL1; NACE MR 0175-03; NACE MR 0103-10 | Sheets:4 Sheet: 3 INSPECTION CERTIFICATE EN10204/3.1 Nr.326769 PLANT ORDER № 8014906708 |
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|  QMS Certified | CUSTOMER DSS INTERNATIONAL SA Switzerland | PRODUCT DESCRIPTION Bars and rods of corrosion-resistant (stainless) steel forged, peeled. Прутки из коррозионностойких (нержавеющих) сталей кованные, обточенные. STEEL MAKING PROCESS: EAF+AOD СПОСОБ ВЫПЛАВКИ: Электродуговая печь+АКР Round 13.000in/330.20 mm L=3.340m/10.951ft L=3.060m/10.033ft Grade: 316/316L/1.4401/1.4404 | QUANTITY: (number of pcs) | 1bund Q-5181 lb/2350 kg 1bund Q-4718 lb/2140 kg |
| | | | Delivery condition solution annealed :1904° F(1040°C)water 30minutes 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 № A05318 | .019 | .45 | 1.39 | .038 | .025 | 16,95 | 10.21 | 2.08 | .07 | .30 | .05 | .07 | .006 | .08 | .012 | .030 | .011 | .0024 |

| DIN EN 10002-1, ASTM A370-09 | | | | | | | | | | 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 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 We acknowledge that the delivered products conform to the requirements of the order | | | | | | | | |
|------------------------------|--|-----|--|---------------------------------------|----|-----------------------------|---------------------|------------------------|-------------|---|--|--|--|--|--|--|--|--|
| 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 | | In 2 inches (50mm) or 4D, min, % L | L | | | Q | | | | | | | | | | |
| REQUIRED | 205 | 240 | 515-700 | 45 | 35 | 40 | 50 | 140-217 | 100 | | | | | | | | | |
| EFFECTIVE | 276 | 308 | 562 | 61 | 57 | 60 | 77 | 167 | 204 204 204 | 61 61 61 | | | | | | | | |

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| 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 1a;class 3:OK | | | | | | | | | Manufacturer:PrJSC DNIPROSPETSSTAL Date: 31.10.17 Manager of quality assurance department - V. Kapaieva Signed:  Zaporozhye Made in Ukraine. | | | | | | | | |
| Radiation free; mercury free. No Weld or Weld repair. | | | | | | | | | | | | | | | | | | | | |

Мау 04/18