

C240609
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PrJSC DNIPROSPETSSTAL, YUZHNOYE SHOSSE 81, 69008 ZAPOROZHYE, UKRAINE

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| | Contract No.: 20002 TECHN.PROTOCOL № 390-11 SPEC.№1897/PO45605 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:7 Sheet: 2 INSPECTION CERTIFICATE EN10204/3.1 Nr.344691 PLANT ORDER № 8014901897 |
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| GMS 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 18.750in/476.25 mm L=4.902 ft/1.495m L=5.082 ft/1.550m Grade: 316/316L/1.4401/1.4404 | QUANTITY: 1bund Q-4802 lb/2178 kg (number of pcs) 1bund Q-4969 lb/2254 kg |
| | | | Delivery condition solution annealed :1940 ⁰ F(1060 ⁰ 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 № A06949 | .019 | .42 | 1.33 | .037 | .028 | 16,95 | 10.43 | 2.07 | .054 | .32 | .06 | .03 | .005 | .14 | .01 | .026 | .0094 | .0023 |

| 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/Подтверждаем, что поставленная продукция соответствует требованиям заказа Ratio of reduction-7.5:1 | | | | | | | | |
|-----------------------------|--|-----|---|-------------------------------------|----|------------------------------|---------------------|------------------------|-------------|---|--|--|--|--|--|--|--|--|
| MECHANICAL PROPERTIES | Yield Strength, (N/mm ²) R0.2% R 1.0% | | Tensile Strength, Rm, (N /mm ²) | Elongation | | Reducti on 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 | 515-690 | 45 | 35 | 40 | 50 | 140-217 | 100 | | | | | | | | | |
| EFFECTIVE | 284 | 317 | 566 | 61 | 56 | 59 | 75 | 167 | 180 180 180 | 61 61 61 | | | | | | | | |

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| Mechanical properties tested in state of delivery | | US - testing | | yes | Results: ASTM A388/A388M-FBH1/5";EN 10228-4 type 1a;class 3:OK | Manufacturer:PrJSC DNIPROSPETSSTAL Date: 23.04.19 Manager of quality assurance department - V. Kapaieva Signed: Zaporozhye Made in Ukraine. |
| Radiation free; mercury free. No Weld or Weld repair. | | | | | | |

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