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PrJSC DNIPROSPETSSTAL, YUZHNOYE SHOSSE 81, 69008 ZAPOROZHYE, UKRAINE

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|  | <p>Contract No. : 20002 TECHN.PROTOCOL № 390-11 SPEC.№3294/PO46349 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</p> | <p>INSPECTION CERTIFICATE EN10204/3.1 Nr.346595 PLANT ORDER № 8014903294</p> |
|  GMS Certified | <p>CUSTOMER DSS INTERNATIONAL SA Switzerland</p> | <p>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 13.000in/330.20 mm L=10.131 ft/3.090m L=10.098 ft/3.080m Grade: 316/316L/1.4401/1.4404</p> |
| <p>QUANTITY: 1bund Q-4753 lb/2156 kg (number of pcs) 1bund Q-4757 lb/2158 kg</p> | | |
| <p>Delivery condition solution annealed :1922⁰ F(1050⁰ C)water 30minutes термообработка:закалка в воду</p> | | |

| 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 № A07342 | .020 | .53 | 1.36 | .040 | .026 | 16,75 | 10.25 | 2.10 | .08 | .31 | .05 | .06 | .005 | .10 | .011 | .033 | .010 | .0024 |

| DIN EN 10002-1,ASTM A370-09 | | | | | | | | | | TECHNICAL REQUIREMENTS: | | | | | | | | | |
|---|--|-----|---|------------|-------|------------------------------|---------------------|-------------------------------------|----------|--|--|--|--|--|--|--|--|--|--|
| 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 | | Macrostructure – GOOD GRAIN SIZE : 6 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 2.5 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-6.7:1 Manufacturer:PrJSC DNIPROSPETSSTAL Date: 24.06.18 Manager of quality assurance department - V. Kapaieva Signed:  Zaporozhye Made in Ukraine. | | | | | | | | | |
| | REQUIRED | 205 | | 240 | 45 35 | | | In 2 inches (50mm) or 4D,min,% L | 40 | | | | | | | | | | |
| EFFECTIVE | 293 | 314 | 568 | 60 55 | 59 | 79 | 167 | 215 215 215 | 61 61 61 | | | | | | | | | | |
| 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. | | | | | | | | | | | | | | | | | | | |

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