




COPY

ASA PO 78169 No 5985 CIA 6FOE 40 (153 pcs) 99353(9th)

C088292

| PJSC DNIPROSPETSSTAL, YUZHNOYE SHOSSE 81, 69008 ZAPOROZHYE, UKRAINE | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|--|--|---|--|--|------------|---------------------------------------|-----------------------------|----------------------------|------------------------|------|--|---|------|------|--|---|------|------|--|--|--|--|--|--|--|
|  | | Contract No.: 50005 TECHN.PROTOCOL № 390-11 SPEC.№0231/P030022-ED DIN EN 10088-3-05, DIN EN 10272-08, DIN EN 10222 5 00, AD2000-Merkblatt W2, AD 2000-Merkblatt W10, 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 5618K 07; AMS 5653F-07; ASTM A193/A193M-10 GR 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: 2 Sheet: 1 QUALITY CERTIFICATE EN10204/3.1 Nr.274329 PLANT ORDER № 8014900231 | | | | | | | | | | | | | |
|  | | CUSTOMER DSS INTERNATIONAL SA Switzerland <i>OK 10/4/13</i> | | | 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: Электроплавочная печь+AOP Round 9.000in/228.60 mm L=3.850m/12.623ft L=3.995m/13.098ft L=3.965m/12.803ft Grade: 316/316L/1.4401/1.4404 | | | | | | | | | | | QUANTITY: (number of pcs) 1bund Q-2844 lb/1290 kg 1bund Q-2985 lb/1354 kg 1bund Q-2910 lb/1320 kg Delivery condition solution annealed ;1900° F(1040°C)water 18minutes термообработка:закалка в воду | | | | | | | | | | |
| ANALYSIS, % | | C | Si | Mn | P | S | Cr | Ni | Mo | Al | Cu | V | W | Ti | Co | Nb | N ₂ | 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 <i>Heat#</i> № 99353 | | .024 | .48 | 1.30 | .034 | .027 | 16.89 | 10.14 | 2.11 | 064 | .29 | .05 | .10 | .005 | .08 | .04 | .025 | .011 | .001 | | | | | | | |
| DIN EN 10002-1, ASTM A370-09 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 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 | | 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 – OK | | | | | | | | | | | | | | |
| | | | | | | As% L Q | In 2 inches (50mm) or 4D, min, % L | | | L | Q | | | | | | | | | | | | | | | |
| REQUIRED | | 205 | 240 | 515-690 | 45 35 | 40 | 50 | 140-223 | 100 | 60 | | | | | | | | | | | | | | | | |
| EFFECTIVE | | 303 307 | 338 342 | 588 582 | 58 53 58 52 | 55 55 | 77 75 | 170 170 | 246 233 235 217 242 251 | 61 61 61 61 61 61 | | | | | | | | | | | | | | | | |
| Mechanical properties tested in state of delivery | | | | | | | | | | | | | | | | | | | | | | | | | | |
| US - testing | | yes | Results: ASME SA-388/SA-388M-10(ASME A 388/A 388M-09)-FBH1/8"; EN 10228-4 type 1a; class 3-OK | | | | | | | | | | | | | | Manufacturer: PJSC DNIPROSPETSSTAL Date: 01.07.13 Manager of quality assurance department - V. Kapaieva Signed:  Zaporozhye Made in Ukraine. | | | | | | | | | |
| Radiation free; mercury free. No Weld or Weld repair. | | | | | | | | | | | | | | | | | | | | | | | | | | |