
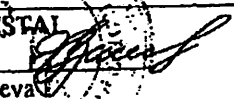


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 CPA - Nozzle 6-40 94727

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|  | | DNEPROSPETSSTAL, YUZHNOYE SHOSSE 81, ZAPOROZHYE 69008, UKRAINE | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|--|---|------------------------------|--|---------------------|------------------------|------------|-----------------------|--|---|------------------------------|------------------------|---------------------|--|----------|----------------|----------|-------------|----|---------|-----|-----------|-----------|-----------|----|------|-----|-----|---|---|----|----|----|----------------|--|----------|-------|-------|-----------|-------|-----------|-------------|------------|-------|------|-------|------|------|------|------|------|------|-----|---------------|------|-----|------|------|------|-------|------|-----|------|-----|-----|-----|-----|-----|-----|------|--|
| Purchase order No.: 07223 TECHN. PROTOCOL No 210-06 SPEC. No 5807/DS 21348 ASTM A182/A182M-05; ASME SA-182/SA-182M-04; ASTM A276-04; ASTM A479/A479M-04; ASTM SA-479/SA-479M-04; ASTM A484/A484M-05; AMS-QQ-S-763A-03 Cond. A; NACE MR 0175-2003; AMS 5639H-02; AMS 5647H-02; ASTM A193/A193M-04 GR B8, CL1 (EXC PAR 6.3) ASME SA-193/SA-193M-04 GR B8, CL 1 (EXC PAR 6.3) | | | | | | | | | | Sheets: 10 Sheet: 8 QUALITY CERTIFICATE No. 231164 PLANT ORDER No 8072235807 | | EN10204/3.1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CUSTOMER "DSS INTERNATIONAL SA" Switzerland | | | | PRODUCT DESCRIPTION Bars and rods of corrosion-resistant (stainless) steel hot rolled peeled on Landgraf line. Прутки из коррозионностойких (нержавеющих) сталей горячекатаные обточенные на линии Ландграф. STEEL MAKING PROCESS: EAF+AOD СПОСОБ ВЫПЛАВКИ: Электродуговая печь+АКР Round 6.250in/158.75 mm L=3.60-5.60m/11.80-18.36ft Grade: 304/F304/304L/F304L | | | | | | | | | | QUANTITY: (number of pcs) 1bund Q-1737 lb/788 kg | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| DELIVERY CONDITION solution annealed :1900-2010° F(1040-1100° C)/water термообработка: закалка в воду | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <table border="1"> <thead> <tr> <th>ANALYSES, %</th> <th>C</th> <th>Si</th> <th>Mn</th> <th>P</th> <th>S</th> <th>Cr</th> <th>Ni</th> <th>Mo</th> <th>Al</th> <th>Cu</th> <th>V</th> <th>W</th> <th>Ti</th> <th>Co</th> <th>Nb</th> <th>N₂</th> <th></th> </tr> </thead> <tbody> <tr> <td>REQUIRED</td> <td><.030</td> <td><1.00</td> <td>1.25-2.00</td> <td><.040</td> <td>.020-.030</td> <td>18.00-20.00</td> <td>8.00-10.50</td> <td><.30</td> <td><.10</td> <td><.40</td> <td><.10</td> <td><.20</td> <td><.15</td> <td><.40</td> <td><.20</td> <td><.10</td> <td></td> </tr> <tr> <td>HEAT No 94727</td> <td>.024</td> <td>.55</td> <td>1.52</td> <td>.033</td> <td>.030</td> <td>18.38</td> <td>8.30</td> <td>.22</td> <td>.083</td> <td>.22</td> <td>.06</td> <td>.08</td> <td>.01</td> <td>.07</td> <td>.01</td> <td>.073</td> <td></td> </tr> </tbody> </table> | | | | | | | | | | | | | | | | | | 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 | 18.00-20.00 | 8.00-10.50 | <.30 | <.10 | <.40 | <.10 | <.20 | <.15 | <.40 | <.20 | <.10 | | HEAT No 94727 | .024 | .55 | 1.52 | .033 | .030 | 18.38 | 8.30 | .22 | .083 | .22 | .06 | .08 | .01 | .07 | .01 | .073 | |
| 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 | 18.00-20.00 | 8.00-10.50 | <.30 | <.10 | <.40 | <.10 | <.20 | <.15 | <.40 | <.20 | <.10 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| HEAT No 94727 | .024 | .55 | 1.52 | .033 | .030 | 18.38 | 8.30 | .22 | .083 | .22 | .06 | .08 | .01 | .07 | .01 | .073 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <table border="1"> <thead> <tr> <th>MECHANICAL PROPERTIES</th> <th>Yield Strength, Ksi(N/mm²) Re (R_{eL})</th> <th>Tensile Strength, Rm, ksi (N/mm²)</th> <th>Elongation, A₅ %</th> <th>Reduction of area, Z %</th> <th>Brinell Hardness HB</th> <th>Impact strength, KV, J</th> </tr> </thead> <tbody> <tr> <td>REQUIRED</td> <td>30(205)</td> <td>75 (515)</td> <td>45</td> <td>50</td> <td>140-223</td> <td>100</td> </tr> <tr> <td>EFFECTIVE</td> <td>50.1(344)</td> <td>89.5(615)</td> <td>56</td> <td>76.5</td> <td>179</td> <td>297</td> </tr> </tbody> </table> | | | | | | | | 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 | 50.1(344) | 89.5(615) | 56 | 76.5 | 179 | 297 | TECHNICAL REQUIREMENTS: Macrostructure - GOOD GRAIN SIZE : 5 to ASTM E 112 Nonmetallic inclusions ASTM E 45 (Method A) <table border="1"> <thead> <tr> <th>A</th> <th>B</th> <th>C</th> <th>D</th> </tr> </thead> <tbody> <tr> <td>thin</td> <td>thick</td> <td>thin</td> <td>thick</td> </tr> <tr> <td>3.0</td> <td>2.0</td> <td>2.1</td> <td>2.0</td> </tr> <tr> <td>0.0</td> <td>0.0</td> <td>1.0</td> <td>1.0</td> </tr> </tbody> </table> ICC-ASTM A262-02a(Method E)-test: O.K. „Dimension/surface defects test, anti-mixing test - O.K.“ Ratio of reduction- 12.6:1 | | | | | | | | | | A | B | C | D | thin | thick | thin | thick | 3.0 | 2.0 | 2.1 | 2.0 | 0.0 | 0.0 | 1.0 | 1.0 | | | | | | | | | | | | | | | | | |
| 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 | 50.1(344) | 89.5(615) | 56 | 76.5 | 179 | 297 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| A | B | C | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| thin | thick | thin | thick | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3.0 | 2.0 | 2.1 | 2.0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0.0 | 0.0 | 1.0 | 1.0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Mechanical properties tested in state of delivery | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| US - testing | | yes | | Results: SEP 1921, 3/ Dd - O.K. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Radiation free; mercury free. No Weld or Weld repair. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Manufacturer: JSC DNEPROSPETSSTAL Date: 22.03.10 Signed:  Kapaieva | | | | | | | | | | Zaporozhye Made in Ukraine. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

✓ Bob