

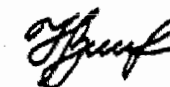


C302648

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

|   |  |   |  |                         |                                     |                             |                     |                            |                      |  |  |      |  |      |   |      |       |       |
|---|--|---|--|-------------------------|-------------------------------------|-----------------------------|---------------------|----------------------------|----------------------|--|--|------|--|------|---|------|-------|-------|
|  | Contract No.: 20002<br>TECHN.PROTOCOL № 390-11 SPEC.№2608/P051243<br>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<br>Cond.A: AMS 5648K-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: 1<br><b>INSPECTION CERTIFICATE EN10204/3.1 Nr.371031</b><br>PLANT ORDER № 8014902608 |      |  |      |   |      |       |       |
|   |   |   | <b>CUSTOMER</b><br><b>DSS INTERNATIONAL</b><br><b>SA Switzerland</b> |                         |                                     |                             |                     |                            |                      |  |  |      | <b>PRODUCT DESCRIPTION</b><br>Bars and rods of corrosion-resistant (stainless) steel forged, peeled. Прутки из коррозионноустойчивых (нержавеющих) сталей кованные, обточенные.<br><b>STEEL MAKING PROCESS: EAF+AOD</b><br><b>СПОСОБ ВЫПЛАВКИ: Электродуговая печь+АКР</b><br>Round 18.750in/476.25 mm L=5.574 ft/1.70 m; L=5.574 ft/1.70 m;<br><b>Grade: 316/316L/1.4401/1.4404</b> |      | <b>QUANTITY:</b><br>(number of pcs) <b>1bund Q-54411b/2468 kg</b><br><b>1bund Q-543291b/2464 kg</b> |      |       |       |
| <b>ANALYSIS, %</b>  |  |   |  |                         |                                     |                             |                     |                            |                      |  |  |      |  |      |   |      |       |       |
|   | 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 № A09969   | .024   | .44   | 1.37   | .040                    | .027                                | 16.79                       | 10.25               | 2.06                       | .074                 | .22  | .06  | .05  | .005   | .10  | .01   | .029 | .0076 | .0023 |
| DIN EN 10002-1, ASTM A370-09  |  |   |  |                         |                                     |                             |                     |                            |                      |  |  |      |  |      |   |      |       |       |
| MECHANICAL PROPERTIES   | Yield Strength, (N/mm <sup>2</sup> )<br>R0.2% R 1.0%   |   | Tensile Strength, Rm, (N/mm <sup>2</sup> )                           | Elongation              |                                     | Reduction of area, Z %<br>L | Brinell Hardness HB | Impact strength, KV, J     |                      | <b>TECHNICAL REQUIREMENTS:</b><br>Macrostructure - GOOD<br>GRAIN SIZE : 5 to ASTM E 112-96(2004)<br>Nonmetallic inclusions ASTM E 45-05 (Method A)<br>A        B        C        D<br>thin thick thin thick thin thick thin thick<br>2.5 2.0 2.0 2.0 0.0 0.0 1.0 1.0<br>ICC-ASTM A262-08 (practice F)-test: O.K.<br>Dimension/surface defects test, anti-mixing test – OK<br>We acknowledge that the delivered products conform to the requirements of the order/Подтверждаем, что поставленная продукция соответствует требованиям заказа<br>Ratio of reduction-7.5:1 |  |      |  |      |   |      |       |       |
|   |  |   |  | A <sub>5</sub> %<br>L Q | In 2 inches (50mm) or 4D,min,%<br>L |                             |                     | L                          | Q                    |  |  |      |  |      |   |      |       |       |
| REQUIRED  | 205  | 240   | 515-690  | 45 35                   | 40                                  | 50                          | 140-217             | 100                        | 60                   |  |  |      |  |      |   |      |       |       |
| EFFECTIVE   | 286<br>290   | 320<br>324  | 570<br>570   | 61 52<br>60 53          | 58<br>58                            | 73<br>74                    | 167<br>167          | 210 210 210<br>214 214 214 | 65 65 65<br>67 67 67 |  |  |      |  |      |   |      |       |       |
| Mechanical properties tested in state of delivery                                 |  |   |  |                         |                                     |                             |                     |                            |                      |  |  |      |  |      |   |      |       |       |
| US - testing  | yes  | Results: ASTM A388/A388M-FBH1/5"; EN 10228-4 type Ia; class 3: OK |  |                         |                                     |                             |                     |                            |                      |  |  |      |  |      |   |      |       |       |
| Radiation free; mercury free. No Weld or Weld repair.                             |  |   |  |                         |                                     |                             |                     |                            |                      | Date: 23.06.2021 <b>Manager of quality assurance department</b><br>- V. Kapaieva Signed:<br>Zaporozhye<br>Melted and Produced in Ukraine<br>MELTED and MANUFACTURED PrJSC " Dniprospetsstal"<br>Phone number +380612834255<br>e-mail: <a href="mailto:info@dss.com.ua">info@dss.com.ua</a><br><a href="http://www.dss-ua.com">http://www.dss-ua.com</a>  |  |      |  |      |   |      |       |       |



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