

**A02/Z03**

INSPECTION CERTIFICATE acc to  
EN 10204 3.1

**A06**

PROCESSKONTROLL ITEMS AB  
BOX 2088  
444 02 STORA HÖGA  
SWEDEN

INSPECTION STAMP

QA-TUBE

| <b>Customer References</b> <span style="float: right;">A07</span><br>763506<br><br><div style="text-align: right;">Customer order<br/>2023-01-16</div><br>003-00991 ITEMS -W                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | <b>Alleima References</b> <span style="float: right;">A08</span><br><table style="width: 100%;"> <tr> <th>Order No.</th> <th>Subs No.</th> <th>Dispatch note</th> </tr> <tr> <td>594317</td> <td>717223</td> <td>28553/54</td> </tr> <tr> <th>Suppl. No</th> <th>C.Code</th> <td></td> </tr> <tr> <td>300-49979</td> <td>15</td> <td></td> </tr> </table> | Order No.          | Subs No.   | Dispatch note | 594317       | 717223    | 28553/54 | Suppl. No | C.Code  |    | 300-49979           | 15   |     |        |    |   |    |               |        |       |   |     |       |  |              |  |  |  |  |  |  |       |  |  |  |  |  |  |  |  |  |       |   |           |             |  |            |  |           |          |          |         |        |        |       |            |      |   |    |    |   |   |    |    |    |        |       |      |      |       |       |       |       |      |  |   |  |  |  |  |  |  |  |        |       |  |  |  |  |  |  |  |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|------------|---------------|--------------|-----------|----------|-----------|---------|----|---------------------|------|-----|--------|----|---|----|---------------|--------|-------|---|-----|-------|--|--------------|--|--|--|--|--|--|-------|--|--|--|--|--|--|--|--|--|-------|---|-----------|-------------|--|------------|--|-----------|----------|----------|---------|--------|--------|-------|------------|------|---|----|----|---|---|----|----|----|--------|-------|------|------|-------|-------|-------|-------|------|--|---|--|--|--|--|--|--|--|--------|-------|--|--|--|--|--|--|--|
| Order No.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Subs No.                                                                                                                                                                                                                                                                                                                                                  | Dispatch note      |            |               |              |           |          |           |         |    |                     |      |     |        |    |   |    |               |        |       |   |     |       |  |              |  |  |  |  |  |  |       |  |  |  |  |  |  |  |  |  |       |   |           |             |  |            |  |           |          |          |         |        |        |       |            |      |   |    |    |   |   |    |    |    |        |       |      |      |       |       |       |       |      |  |   |  |  |  |  |  |  |  |        |       |  |  |  |  |  |  |  |
| 594317                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 717223                                                                                                                                                                                                                                                                                                                                                    | 28553/54           |            |               |              |           |          |           |         |    |                     |      |     |        |    |   |    |               |        |       |   |     |       |  |              |  |  |  |  |  |  |       |  |  |  |  |  |  |  |  |  |       |   |           |             |  |            |  |           |          |          |         |        |        |       |            |      |   |    |    |   |   |    |    |    |        |       |      |      |       |       |       |       |      |  |   |  |  |  |  |  |  |  |        |       |  |  |  |  |  |  |  |
| Suppl. No                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | C.Code                                                                                                                                                                                                                                                                                                                                                    |                    |            |               |              |           |          |           |         |    |                     |      |     |        |    |   |    |               |        |       |   |     |       |  |              |  |  |  |  |  |  |       |  |  |  |  |  |  |  |  |  |       |   |           |             |  |            |  |           |          |          |         |        |        |       |            |      |   |    |    |   |   |    |    |    |        |       |      |      |       |       |       |       |      |  |   |  |  |  |  |  |  |  |        |       |  |  |  |  |  |  |  |
| 300-49979                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 15                                                                                                                                                                                                                                                                                                                                                        |                    |            |               |              |           |          |           |         |    |                     |      |     |        |    |   |    |               |        |       |   |     |       |  |              |  |  |  |  |  |  |       |  |  |  |  |  |  |  |  |  |       |   |           |             |  |            |  |           |          |          |         |        |        |       |            |      |   |    |    |   |   |    |    |    |        |       |      |      |       |       |       |       |      |  |   |  |  |  |  |  |  |  |        |       |  |  |  |  |  |  |  |
| <b>Material description</b> <span style="float: right;">B01/B04</span><br>SEAMLESS STAINLESS COLD FINISHED<br>HYDRAULIC TUBING<br><br><br><br><b>Metallurgical process</b> <span style="float: right;">C70</span><br>Electric furnace                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | <b>Steel/material Designations</b> <span style="float: right;">B02</span><br><table style="width: 100%;"> <tr> <th>Alleima</th> <th>AISI</th> </tr> <tr> <td>3R60</td> <td>TP316/TP316L</td> </tr> <tr> <th>EN no</th> <td></td> </tr> <tr> <td>1.4435</td> <td></td> </tr> </table>                                                                      | Alleima            | AISI       | 3R60          | TP316/TP316L | EN no     |          | 1.4435    |         |    |                     |      |     |        |    |   |    |               |        |       |   |     |       |  |              |  |  |  |  |  |  |       |  |  |  |  |  |  |  |  |  |       |   |           |             |  |            |  |           |          |          |         |        |        |       |            |      |   |    |    |   |   |    |    |    |        |       |      |      |       |       |       |       |      |  |   |  |  |  |  |  |  |  |        |       |  |  |  |  |  |  |  |
| Alleima                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | AISI                                                                                                                                                                                                                                                                                                                                                      |                    |            |               |              |           |          |           |         |    |                     |      |     |        |    |   |    |               |        |       |   |     |       |  |              |  |  |  |  |  |  |       |  |  |  |  |  |  |  |  |  |       |   |           |             |  |            |  |           |          |          |         |        |        |       |            |      |   |    |    |   |   |    |    |    |        |       |      |      |       |       |       |       |      |  |   |  |  |  |  |  |  |  |        |       |  |  |  |  |  |  |  |
| 3R60                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | TP316/TP316L                                                                                                                                                                                                                                                                                                                                              |                    |            |               |              |           |          |           |         |    |                     |      |     |        |    |   |    |               |        |       |   |     |       |  |              |  |  |  |  |  |  |       |  |  |  |  |  |  |  |  |  |       |   |           |             |  |            |  |           |          |          |         |        |        |       |            |      |   |    |    |   |   |    |    |    |        |       |      |      |       |       |       |       |      |  |   |  |  |  |  |  |  |  |        |       |  |  |  |  |  |  |  |
| EN no                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                           |                    |            |               |              |           |          |           |         |    |                     |      |     |        |    |   |    |               |        |       |   |     |       |  |              |  |  |  |  |  |  |       |  |  |  |  |  |  |  |  |  |       |   |           |             |  |            |  |           |          |          |         |        |        |       |            |      |   |    |    |   |   |    |    |    |        |       |      |      |       |       |       |       |      |  |   |  |  |  |  |  |  |  |        |       |  |  |  |  |  |  |  |
| 1.4435                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                           |                    |            |               |              |           |          |           |         |    |                     |      |     |        |    |   |    |               |        |       |   |     |       |  |              |  |  |  |  |  |  |       |  |  |  |  |  |  |  |  |  |       |   |           |             |  |            |  |           |          |          |         |        |        |       |            |      |   |    |    |   |   |    |    |    |        |       |      |      |       |       |       |       |      |  |   |  |  |  |  |  |  |  |        |       |  |  |  |  |  |  |  |
| <b>Technical requirements</b> <span style="float: right;">B03</span><br>ASTM A-213-21B AW, ASME SA-213-ED-21 AW, ASTM A-269-15A<br>NACE MR0175/ISO 15156-3:-2015, NACE MR0103/ISO 17945-1:-2015<br>PED 2014/68/EU EN 10216-5 TC1<br>HRB MAX 80                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                           |                    |            |               |              |           |          |           |         |    |                     |      |     |        |    |   |    |               |        |       |   |     |       |  |              |  |  |  |  |  |  |       |  |  |  |  |  |  |  |  |  |       |   |           |             |  |            |  |           |          |          |         |        |        |       |            |      |   |    |    |   |   |    |    |    |        |       |      |      |       |       |       |       |      |  |   |  |  |  |  |  |  |  |        |       |  |  |  |  |  |  |  |
| <table style="width: 100%;"> <tr> <th colspan="7">EXTENT OF DELIVERY</th> <th style="text-align: right;">B07-B13</th> </tr> <tr> <th>It</th> <th>Product designation</th> <th>Heat</th> <th>Lot</th> <th>Pieces</th> <th>Kg</th> <th>M</th> </tr> <tr> <td>01</td> <td>THT-3R60-10-1</td> <td>044452</td> <td>96657</td> <td>6</td> <td>8.0</td> <td>36.00</td> </tr> <tr> <td></td> <td>10.00 X 1.00</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td>10772</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td colspan="4"></td> <td style="text-align: right;">Total</td> <td>6</td> <td>8.0 36.00</td> </tr> </table><br><table style="width: 100%;"> <tr> <th colspan="2">KEY TO HEAT</th> <th colspan="2">KEY TO LOT</th> </tr> <tr> <th>Heat Code</th> <th>Heat No.</th> <th>Lot Code</th> <th>Lot No.</th> </tr> <tr> <td>044452</td> <td>566709</td> <td>96657</td> <td>2082790-11</td> </tr> </table><br><b>TEST RESULTS</b><br><b>Chemical composition (weight%)</b><br><table style="width: 100%;"> <tr> <th>Heat</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> </tr> <tr> <td>044452</td> <td>0.019</td> <td>0.40</td> <td>1.58</td> <td>0.030</td> <td>0.006</td> <td>17.25</td> <td>13.12</td> <td>2.62</td> </tr> <tr> <td></td> <th>N</th> <td colspan="7"></td> </tr> <tr> <td>044452</td> <td>0.035</td> <td colspan="7"></td> </tr> </table> |                                                                                                                                                                                                                                                                                                                                                           | EXTENT OF DELIVERY |            |               |              |           |          |           | B07-B13 | It | Product designation | Heat | Lot | Pieces | Kg | M | 01 | THT-3R60-10-1 | 044452 | 96657 | 6 | 8.0 | 36.00 |  | 10.00 X 1.00 |  |  |  |  |  |  | 10772 |  |  |  |  |  |  |  |  |  | Total | 6 | 8.0 36.00 | KEY TO HEAT |  | KEY TO LOT |  | Heat Code | Heat No. | Lot Code | Lot No. | 044452 | 566709 | 96657 | 2082790-11 | Heat | C | Si | Mn | P | S | Cr | Ni | Mo | 044452 | 0.019 | 0.40 | 1.58 | 0.030 | 0.006 | 17.25 | 13.12 | 2.62 |  | N |  |  |  |  |  |  |  | 044452 | 0.035 |  |  |  |  |  |  |  |
| EXTENT OF DELIVERY                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                           |                    |            |               |              |           | B07-B13  |           |         |    |                     |      |     |        |    |   |    |               |        |       |   |     |       |  |              |  |  |  |  |  |  |       |  |  |  |  |  |  |  |  |  |       |   |           |             |  |            |  |           |          |          |         |        |        |       |            |      |   |    |    |   |   |    |    |    |        |       |      |      |       |       |       |       |      |  |   |  |  |  |  |  |  |  |        |       |  |  |  |  |  |  |  |
| It                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Product designation                                                                                                                                                                                                                                                                                                                                       | Heat               | Lot        | Pieces        | Kg           | M         |          |           |         |    |                     |      |     |        |    |   |    |               |        |       |   |     |       |  |              |  |  |  |  |  |  |       |  |  |  |  |  |  |  |  |  |       |   |           |             |  |            |  |           |          |          |         |        |        |       |            |      |   |    |    |   |   |    |    |    |        |       |      |      |       |       |       |       |      |  |   |  |  |  |  |  |  |  |        |       |  |  |  |  |  |  |  |
| 01                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | THT-3R60-10-1                                                                                                                                                                                                                                                                                                                                             | 044452             | 96657      | 6             | 8.0          | 36.00     |          |           |         |    |                     |      |     |        |    |   |    |               |        |       |   |     |       |  |              |  |  |  |  |  |  |       |  |  |  |  |  |  |  |  |  |       |   |           |             |  |            |  |           |          |          |         |        |        |       |            |      |   |    |    |   |   |    |    |    |        |       |      |      |       |       |       |       |      |  |   |  |  |  |  |  |  |  |        |       |  |  |  |  |  |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 10.00 X 1.00                                                                                                                                                                                                                                                                                                                                              |                    |            |               |              |           |          |           |         |    |                     |      |     |        |    |   |    |               |        |       |   |     |       |  |              |  |  |  |  |  |  |       |  |  |  |  |  |  |  |  |  |       |   |           |             |  |            |  |           |          |          |         |        |        |       |            |      |   |    |    |   |   |    |    |    |        |       |      |      |       |       |       |       |      |  |   |  |  |  |  |  |  |  |        |       |  |  |  |  |  |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 10772                                                                                                                                                                                                                                                                                                                                                     |                    |            |               |              |           |          |           |         |    |                     |      |     |        |    |   |    |               |        |       |   |     |       |  |              |  |  |  |  |  |  |       |  |  |  |  |  |  |  |  |  |       |   |           |             |  |            |  |           |          |          |         |        |        |       |            |      |   |    |    |   |   |    |    |    |        |       |      |      |       |       |       |       |      |  |   |  |  |  |  |  |  |  |        |       |  |  |  |  |  |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                           |                    |            | Total         | 6            | 8.0 36.00 |          |           |         |    |                     |      |     |        |    |   |    |               |        |       |   |     |       |  |              |  |  |  |  |  |  |       |  |  |  |  |  |  |  |  |  |       |   |           |             |  |            |  |           |          |          |         |        |        |       |            |      |   |    |    |   |   |    |    |    |        |       |      |      |       |       |       |       |      |  |   |  |  |  |  |  |  |  |        |       |  |  |  |  |  |  |  |
| KEY TO HEAT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                           | KEY TO LOT         |            |               |              |           |          |           |         |    |                     |      |     |        |    |   |    |               |        |       |   |     |       |  |              |  |  |  |  |  |  |       |  |  |  |  |  |  |  |  |  |       |   |           |             |  |            |  |           |          |          |         |        |        |       |            |      |   |    |    |   |   |    |    |    |        |       |      |      |       |       |       |       |      |  |   |  |  |  |  |  |  |  |        |       |  |  |  |  |  |  |  |
| Heat Code                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Heat No.                                                                                                                                                                                                                                                                                                                                                  | Lot Code           | Lot No.    |               |              |           |          |           |         |    |                     |      |     |        |    |   |    |               |        |       |   |     |       |  |              |  |  |  |  |  |  |       |  |  |  |  |  |  |  |  |  |       |   |           |             |  |            |  |           |          |          |         |        |        |       |            |      |   |    |    |   |   |    |    |    |        |       |      |      |       |       |       |       |      |  |   |  |  |  |  |  |  |  |        |       |  |  |  |  |  |  |  |
| 044452                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 566709                                                                                                                                                                                                                                                                                                                                                    | 96657              | 2082790-11 |               |              |           |          |           |         |    |                     |      |     |        |    |   |    |               |        |       |   |     |       |  |              |  |  |  |  |  |  |       |  |  |  |  |  |  |  |  |  |       |   |           |             |  |            |  |           |          |          |         |        |        |       |            |      |   |    |    |   |   |    |    |    |        |       |      |      |       |       |       |       |      |  |   |  |  |  |  |  |  |  |        |       |  |  |  |  |  |  |  |
| Heat                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | C                                                                                                                                                                                                                                                                                                                                                         | Si                 | Mn         | P             | S            | Cr        | Ni       | Mo        |         |    |                     |      |     |        |    |   |    |               |        |       |   |     |       |  |              |  |  |  |  |  |  |       |  |  |  |  |  |  |  |  |  |       |   |           |             |  |            |  |           |          |          |         |        |        |       |            |      |   |    |    |   |   |    |    |    |        |       |      |      |       |       |       |       |      |  |   |  |  |  |  |  |  |  |        |       |  |  |  |  |  |  |  |
| 044452                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 0.019                                                                                                                                                                                                                                                                                                                                                     | 0.40               | 1.58       | 0.030         | 0.006        | 17.25     | 13.12    | 2.62      |         |    |                     |      |     |        |    |   |    |               |        |       |   |     |       |  |              |  |  |  |  |  |  |       |  |  |  |  |  |  |  |  |  |       |   |           |             |  |            |  |           |          |          |         |        |        |       |            |      |   |    |    |   |   |    |    |    |        |       |      |      |       |       |       |       |      |  |   |  |  |  |  |  |  |  |        |       |  |  |  |  |  |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | N                                                                                                                                                                                                                                                                                                                                                         |                    |            |               |              |           |          |           |         |    |                     |      |     |        |    |   |    |               |        |       |   |     |       |  |              |  |  |  |  |  |  |       |  |  |  |  |  |  |  |  |  |       |   |           |             |  |            |  |           |          |          |         |        |        |       |            |      |   |    |    |   |   |    |    |    |        |       |      |      |       |       |       |       |      |  |   |  |  |  |  |  |  |  |        |       |  |  |  |  |  |  |  |
| 044452                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 0.035                                                                                                                                                                                                                                                                                                                                                     |                    |            |               |              |           |          |           |         |    |                     |      |     |        |    |   |    |               |        |       |   |     |       |  |              |  |  |  |  |  |  |       |  |  |  |  |  |  |  |  |  |       |   |           |             |  |            |  |           |          |          |         |        |        |       |            |      |   |    |    |   |   |    |    |    |        |       |      |      |       |       |       |       |      |  |   |  |  |  |  |  |  |  |        |       |  |  |  |  |  |  |  |
| <b>Quality assurance - Sofia Åkesson / Q-Manager</b><br>MTC Service / Certificates                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                           | A05/Z02            |            |               |              |           |          |           |         |    |                     |      |     |        |    |   |    |               |        |       |   |     |       |  |              |  |  |  |  |  |  |       |  |  |  |  |  |  |  |  |  |       |   |           |             |  |            |  |           |          |          |         |        |        |       |            |      |   |    |    |   |   |    |    |    |        |       |      |      |       |       |       |       |      |  |   |  |  |  |  |  |  |  |        |       |  |  |  |  |  |  |  |



**Chemical composition, product (weight%)**

| Heat   | C     | Si   | Mn   | P     | S     | Cr    | Ni    | Mo   |
|--------|-------|------|------|-------|-------|-------|-------|------|
| 044452 | 0.021 | 0.40 | 1.58 | 0.029 | 0.005 | 17.21 | 13.12 | 2.62 |
|        | N     |      |      |       |       |       |       |      |
| 044452 | 0.030 |      |      |       |       |       |       |      |

**Tensile test at room temperature**

| Lot   | Yield strength |       | Tensile strength | Elongation |    |
|-------|----------------|-------|------------------|------------|----|
|       | MPa            | MPa   | MPa              | %          | %  |
|       | Rp0.2          | Rp1.0 | Rm               | A          | 2" |
| 96657 | 304            | 332   | 573              | 55         | 55 |

**Hardness test**

| Lot   | Min | Max |
|-------|-----|-----|
|       | HRB | HRB |
| 96657 | 76  | 76  |

**Following controls/tests have been satisfactorily performed:**

- Flattening test.
- Flaring test
- 100% PMI-test.
- Intergranular corrosion test acc to ASTM A-262 PR.E and EN ISO 3651-2A
- Leak test: Eddy current test acc to EN ISO 10893-1, ASME SA-1016.
- Visual inspection and dimensional control.

**Heat Treatment:**

Solution annealed at a temperature of Min 1040° C and quenched.

**Marking:**

3R60 ASTM/ASME A/SA213 A269 COLD EN 10216-5 TC1 AW TP 316/TP 316L EN 1.4435 CF A SML NDE 10.00 X 1.00 MM . HT 566709 SZ LOT 2082790-11 MADE BY ALLEIMA IN CZE CHIA \*QA-TUBE\*

The raw material is free from radioactive contamination.

Material free from mercury contamination.

No welding or weld repair.

Approved acc. AD 2000-Merkblatt W0 and certified acc. to Pressure Equipment Directive (2014/68/EU, Annex 1 para 4.3) by TUEV NORD; notified body, reg.no. 0045.

The number of tests are based on the size of the manufacturing lot before cutting to finished lengths.

The delivered products comply with the specifications and requirements of the order.

The material is manufactured according to a Quality system, approved and registered to ISO 9001:2015.



No unauthorized alterations. The contents of this Inspection Certificate may not be modified or revised in any way without the prior written approval of Alleima.

Unauthorized alterations to the Inspection Certificate, including introduction of false, fictitious or fraudulent statements or entries, may be punishable by fines, imprisonment, or both. This Inspection Certificate may be copied only in the manner and for the purposes specified in Section 6 of EN 10204:2004. Contravention of this notice will be prosecuted to the fullest extent of applicable law.

The certificate is produced with EDP and valid without signature.

TEST RESULTS TRANSFERRED FROM CERTIFICATE NO C-8321/10

