

Raccordi in acciaio per impianti ad alta pressione  
Steel fittings for high pressure plants

|                                        |                                                             |                 |
|----------------------------------------|-------------------------------------------------------------|-----------------|
| CUENTE / Purchaser<br><b>SAMIC SRL</b> | CERTIFICATO DI COLLAUDO<br>Works certificate EN 10204 3.1.B | FOGLIO<br>Sheet |
| ORDINE / Order<br><b>010260RD103RO</b> | N. <b>28651</b> DEL/Of <b>10/10/2001</b>                    | <b>1</b>        |

| ITEM<br>Item  | QUANTITÀ<br>Quantity | DESCRIZIONE / Description                      | COLATA<br>Heat    | MATERIALE<br>Material | CERTIF. ORIG.<br>Mfr certif. | ACCIAIERIA<br>Steel plant |
|---------------|----------------------|------------------------------------------------|-------------------|-----------------------|------------------------------|---------------------------|
| <del>10</del> | <del>20</del>        | <del>HEX. NIPPLE 1.1/4 3000 NPT A105GAL.</del> | <del>T212</del>   | <del>A105</del>       | <del>1077.90</del>           | <del>SIDER SCAL</del>     |
| <del>20</del> | <del>20</del>        | <del>ELBOW 45° 1.1/4 3000 NPT A105GAL.</del>   | <del>6764</del>   | <del>A105</del>       | <del>1077.90</del>           | <del>SIDER SCAL</del>     |
| <del>22</del> | <del>10</del>        | <del>ELBOW 45° 2.1/2 3000 NPT A105GAL.</del>   | <del>32606</del>  | <del>A105</del>       | <del>11935/2593</del>        | <del>A.F. CARONNO</del>   |
| <del>29</del> | <del>5</del>         | <del>COUPLING 2.1/2 3000 NPT A105GAL.</del>    | <del>904146</del> | <del>A105</del>       | <del>11176/809.4</del>       | <del>DALMINE</del>        |
| <del>34</del> | <del>30</del>        | <del>UNION 1.1/4 3000 NPT A105GAL.</del>       | <del>77166</del>  | <del>A105</del>       | <del>44479.9L</del>          | <del>RIVA</del>           |
| <del>35</del> | <del>30</del>        | <del>UNION 2 3000 NPT A105GAL.</del>           | <del>75537</del>  | <del>A105</del>       | <del>35385.9L</del>          | <del>RIVA</del>           |
| <del>37</del> | <del>5</del>         | <del>UNION 3 3000 NPT A105GAL.</del>           | <del>563562</del> | <del>A105</del>       | <del>3393.9L</del>           | <del>SIDER SCAL</del>     |
| <del>38</del> | <del>2</del>         | <del>UNION 4 3000 NPT A105GAL.</del>           | <del>76765</del>  | <del>A105</del>       | <del>38302.9L</del>          | <del>RIVA</del>           |
| <del>39</del> | <del>10</del>        | <del>RED. TEE 1.1/4x1 3000 NPT A105GAL.</del>  | <del>72972</del>  | <del>A105</del>       | <del>1689/2012</del>         | <del>SIDER SCAL</del>     |

ANALISI CHIMICA - Chemical Analysis

| COLATA<br>Heat    | C<br>%           | Mn<br>%         | Si<br>%         | P<br>%           | S<br>%           | Ni<br>%         | Cr<br>%         | Mo<br>%          | Ti<br>%          | V<br>%           | Al<br>%          | Nb<br>%          | N<br>%           | %                | %                | C.E.<br>%       |
|-------------------|------------------|-----------------|-----------------|------------------|------------------|-----------------|-----------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|-----------------|
| <del>T212</del>   | <del>0,180</del> | <del>0,89</del> | <del>0,22</del> | <del>0,012</del> | <del>0,008</del> | <del>0,12</del> | <del>0,07</del> | <del>0,020</del> | <del>0,001</del> | <del>0,270</del> | <del>0,021</del> | <del>0,002</del> | <del>0,001</del> | <del>0,001</del> | <del>0,001</del> | <del>0,37</del> |
| <del>6764</del>   | <del>0,220</del> | <del>0,81</del> | <del>0,30</del> | <del>0,019</del> | <del>0,033</del> | <del>0,12</del> | <del>0,01</del> | <del>0,020</del> | <del>0,001</del> | <del>0,200</del> | <del>0,001</del> | <del>0,001</del> | <del>0,001</del> | <del>0,001</del> | <del>0,001</del> | <del>0,38</del> |
| <del>32606</del>  | <del>0,190</del> | <del>0,96</del> | <del>0,25</del> | <del>0,012</del> | <del>0,015</del> | <del>0,09</del> | <del>0,13</del> | <del>0,010</del> | <del>0,003</del> | <del>0,140</del> | <del>0,005</del> | <del>0,002</del> | <del>0,001</del> | <del>0,001</del> | <del>0,001</del> | <del>0,40</del> |
| <del>904146</del> | <del>0,180</del> | <del>1,34</del> | <del>0,27</del> | <del>0,015</del> | <del>0,003</del> | <del>0,04</del> | <del>0,05</del> | <del>0,010</del> | <del>0,001</del> | <del>0,080</del> | <del>0,027</del> | <del>0,001</del> | <del>0,001</del> | <del>0,001</del> | <del>0,001</del> | <del>0,42</del> |
| <del>77166</del>  | <del>0,180</del> | <del>1,13</del> | <del>0,16</del> | <del>0,010</del> | <del>0,015</del> | <del>0,05</del> | <del>0,06</del> | <del>0,010</del> | <del>0,026</del> | <del>0,140</del> | <del>0,022</del> | <del>0,001</del> | <del>0,001</del> | <del>0,001</del> | <del>0,001</del> | <del>0,40</del> |
| <del>75537</del>  | <del>0,200</del> | <del>1,01</del> | <del>0,21</del> | <del>0,016</del> | <del>0,020</del> | <del>0,04</del> | <del>0,11</del> | <del>0,010</del> | <del>0,002</del> | <del>0,120</del> | <del>0,005</del> | <del>0,001</del> | <del>0,001</del> | <del>0,001</del> | <del>0,001</del> | <del>0,40</del> |
| <del>563562</del> | <del>0,210</del> | <del>0,85</del> | <del>0,26</del> | <del>0,005</del> | <del>0,005</del> | <del>0,11</del> | <del>0,10</del> | <del>0,020</del> | <del>0,004</del> | <del>0,170</del> | <del>0,030</del> | <del>0,002</del> | <del>0,001</del> | <del>0,001</del> | <del>0,001</del> | <del>0,39</del> |
| <del>76765</del>  | <del>0,185</del> | <del>1,06</del> | <del>0,16</del> | <del>0,015</del> | <del>0,023</del> | <del>0,06</del> | <del>0,06</del> | <del>0,010</del> | <del>0,002</del> | <del>0,170</del> | <del>0,005</del> | <del>0,001</del> | <del>0,001</del> | <del>0,001</del> | <del>0,001</del> | <del>0,39</del> |
| <del>72972</del>  | <del>0,200</del> | <del>0,89</del> | <del>0,27</del> | <del>0,007</del> | <del>0,006</del> | <del>0,11</del> | <del>0,05</del> | <del>0,023</del> | <del>0,005</del> | <del>0,198</del> | <del>0,019</del> | <del>0,002</del> | <del>0,001</del> | <del>0,001</del> | <del>0,001</del> | <del>0,39</del> |

CARATTERISTICHE MECCANICHE - Mechanical Test

| COLATA<br>Heat    | R<br>Tensile<br>Strength<br>N/mm² | S<br>Yield Point<br>N/mm² | A: 2"<br>Elongation<br>% | C<br>Reduction<br>of area<br>% | Bending<br>Test | Flaring<br>Test | Hydraulic<br>Test | H/B<br>Hardness test | K<br>Impact test<br>J | Temp. °C | STATO DI FORNIT. (TRATT. TERM.)<br>Supply cond. (heat treatment) | TEMP.<br>°C | NOTE<br>Remarks |
|-------------------|-----------------------------------|---------------------------|--------------------------|--------------------------------|-----------------|-----------------|-------------------|----------------------|-----------------------|----------|------------------------------------------------------------------|-------------|-----------------|
| <del>T212</del>   | <del>516</del>                    | <del>325</del>            | <del>30,0</del>          | <del>60,0</del>                |                 |                 |                   | <del>155 155</del>   |                       |          |                                                                  |             |                 |
| <del>6764</del>   | <del>541</del>                    | <del>344</del>            | <del>29,6</del>          | <del>40,2</del>                |                 |                 |                   | <del>160 162</del>   |                       |          |                                                                  |             |                 |
| <del>32606</del>  | <del>517</del>                    | <del>320</del>            | <del>32,4</del>          | <del>58,0</del>                |                 |                 |                   | <del>150 155</del>   |                       |          |                                                                  |             |                 |
| <del>904146</del> | <del>599</del>                    | <del>401</del>            | <del>23,9</del>          | <del>55,0</del>                |                 |                 |                   | <del>158 161</del>   |                       |          |                                                                  |             |                 |
| <del>77166</del>  | <del>534</del>                    | <del>330</del>            | <del>31,4</del>          | <del>55,6</del>                |                 |                 |                   | <del>160 160</del>   |                       |          |                                                                  |             |                 |
| <del>75537</del>  | <del>532</del>                    | <del>322</del>            | <del>31,5</del>          | <del>55,0</del>                |                 |                 |                   | <del>158 158</del>   |                       |          |                                                                  |             |                 |
| <del>563562</del> | <del>532</del>                    | <del>362</del>            | <del>27,0</del>          | <del>66,0</del>                |                 |                 |                   | <del>160 162</del>   |                       |          |                                                                  |             |                 |
| <del>76765</del>  | <del>527</del>                    | <del>326</del>            | <del>31,0</del>          | <del>56,0</del>                |                 |                 |                   | <del>155 158</del>   |                       |          |                                                                  |             |                 |
| <del>72972</del>  | <del>506</del>                    | <del>300</del>            | <del>28,0</del>          | <del>65,0</del>                |                 |                 |                   | <del>153 153</del>   |                       |          |                                                                  |             |                 |

|                                                                                                                   |                |
|-------------------------------------------------------------------------------------------------------------------|----------------|
| NATURA DEL MATERIALE / Kind of material<br>Acciaio elaborato al forno elettrico<br>Steel made by electric furnace | NOTE / Remarks |
|-------------------------------------------------------------------------------------------------------------------|----------------|

|                                                                                  |                                   |                                              |                   |
|----------------------------------------------------------------------------------|-----------------------------------|----------------------------------------------|-------------------|
| COLLAUDI INTERNI / Works inspection<br>Visivo/Dimensionale<br>Visual/Dimensional | RISULT.<br>Result<br>O.K.<br>O.K. | COLLAUDI SUPPLEMENTARI / Supplementary tests | RISULT.<br>Result |
|----------------------------------------------------------------------------------|-----------------------------------|----------------------------------------------|-------------------|

|                                        |                                       |                     |
|----------------------------------------|---------------------------------------|---------------------|
| RESPONSABILE QUALITÀ / Quality Manager | ENTE COLLAUDATORE / Inspection agency | turozzi<br>fratelli |
|----------------------------------------|---------------------------------------|---------------------|

Raccordi in acciaio per impianti ad alta pressione  
Steel fittings for high pressure plants

|                                         |                                                             |                 |
|-----------------------------------------|-------------------------------------------------------------|-----------------|
| CLIENTE / Purchaser<br><b>SAMIC SRL</b> | CERTIFICATO DI COLLAUDO<br>Works certificate EN 10204 3.1-B | FOGLIO<br>Sheet |
| ORDINE / Order<br><b>010260RD103RO</b>  | N. <b>28651</b> DEL / OF <b>10/10/2001</b>                  | <b>2</b>        |

| ITEM<br>Item | QUANTITÀ<br>Quantity | DESCRIZIONE / Description | COLATA<br>Heat | MATERIALE<br>Material | CERTIF. ORIG.<br>Orig. certif. | ACCIAIERIA<br>Steel plant |
|--------------|----------------------|---------------------------|----------------|-----------------------|--------------------------------|---------------------------|
| 75           | 2                    | UNION 4 3000 SW A105      | 76765          | A105                  | 38382.9L                       | RIVA                      |

ANALISI CHIMICA - Chemical Analysis

| COLATA<br>Heat | C<br>% | Mn<br>% | Si<br>% | P<br>% | S<br>% | NI<br>% | Cr<br>% | Mo<br>% | Ti<br>% | V<br>% | Cu<br>% | Al<br>% | Nb<br>% | N<br>% | % | % | C.E.<br>% |
|----------------|--------|---------|---------|--------|--------|---------|---------|---------|---------|--------|---------|---------|---------|--------|---|---|-----------|
| 76765          | 0,185  | 1,06    | 0,18    | 0,015  | 0,023  | 0,06    | 0,06    | 0,010   |         | 0,002  | 0,170   | 0,005   | 0,001   |        |   |   | 0,39      |

CARATTERISTICHE MECCANICHE - Mechanical Test

| COLATA<br>Heat | R<br>Tensile<br>Strength<br>N/mm <sup>2</sup> | S<br>Yield Point<br>N/mm <sup>2</sup> | A : 2"<br>Elongation<br>% | C<br>Reduction<br>of area % | Bending<br>Test | Quenching<br>Test | Hydraulic<br>Test | HB<br>Hardness test | K<br>Impact test<br>J | Temp. °C | STATO DI FORNIT. (TRATT. TERM.)<br>Supply cond. (heat treatment) | TEMP.<br>°C | NOTE<br>Remarks |
|----------------|-----------------------------------------------|---------------------------------------|---------------------------|-----------------------------|-----------------|-------------------|-------------------|---------------------|-----------------------|----------|------------------------------------------------------------------|-------------|-----------------|
| 76765          | 527                                           | 326                                   | 31,8                      | 56,0                        |                 |                   |                   | 155 158             |                       |          |                                                                  |             |                 |

|                                                                                                                   |                |
|-------------------------------------------------------------------------------------------------------------------|----------------|
| NATURA DEL MATERIALE / Kind of material<br>Acciaio elaborato al forno elettrico<br>Steel made by electric furnace | NOTE / Remarks |
|-------------------------------------------------------------------------------------------------------------------|----------------|

|                                                                                  |                                   |                                              |                   |
|----------------------------------------------------------------------------------|-----------------------------------|----------------------------------------------|-------------------|
| COLLAUDI INTERNI / Works Inspection<br>Visivo/Dimensionale<br>Visual/Dimensional | RISULT.<br>Result<br>O.K.<br>O.K. | COLLAUDI SUPPLEMENTARI / Supplementary tests | RISULT.<br>Result |
|----------------------------------------------------------------------------------|-----------------------------------|----------------------------------------------|-------------------|

|                                        |                                       |                     |
|----------------------------------------|---------------------------------------|---------------------|
| RESPONSABILE QUALITÀ / Quality Manager | ENTE COLLAUDATORE / Inspection agency | turozzi<br>fratelli |
|----------------------------------------|---------------------------------------|---------------------|