
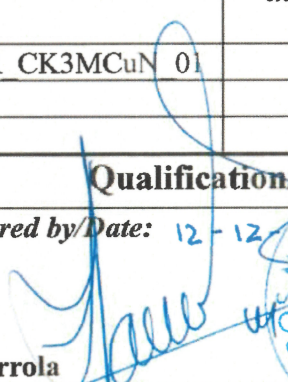





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|--|--|----------------------------|---|-----------------------------|----------------------------|
|   | <b>Qualification Test Record (QTR)</b><br><b>NORSOK M-650</b>  |                            | <i>QTR.No.:</i><br>TR_CK3MCuN_01  |                             |                            |
|  |  |                            |   | <i>Rev. No.:</i> 2          |                            |
| <i>Manufacturer name/address/ Web page:</i>  | ACEROS MOLDEADOS DE LACUNZA, SA<br>LAKUNTZA / ARBIZU (SPAIN)<br><a href="http://www.amlsa.com">www.amlsa.com</a>   |                            |   |                             |                            |
| <i>Reference standard</i>  | NORSOK M-650, Edition 4  |                            |   |                             |                            |
| <i>Material designation and MDS No.:</i>   | <ul style="list-style-type: none"> <li>• ASTM A351 Gr. CK-3MCuN</li> <li>• NORSOK M-630 Ed. 6 (MDS R16, Rev. 5)</li> </ul>   |                            |   |                             |                            |
| <i>Manufacturing Summary doc. No.:</i>   | <b>MS_CK3MCuN_01</b>   |                            |   | <i>Rev. No.:</i> 3          |                            |
| <i>Products and manufacturing process(es):</i>   | CASTINGS (sacrificial component valve body DN450 (18") Cl. 600)<br>Sand Molding with Furan Binder<br>AOD route: remelting of 100% AOD refined charge material<br>Production to follow the process of the approved QTR  |                            |   |                             |                            |
| <i>Mandatory conditions and sub-contractors:</i>   | <ul style="list-style-type: none"> <li>- Castings heat treated in current furnaces (H-6)</li> <li>- Raw material: AOD scrap material</li> <li>- Not destructive tests: radiographic (subcontracted to external qualified company S.C.I.) &amp; dye penetrant</li> <li>- Destructive tests (subcontracted to external qualified laboratory AZTERLAN) : tensile test &amp; corrosion test</li> </ul> |                            |   |                             |                            |
| <i>Other information:</i>  | <ul style="list-style-type: none"> <li>• PWHT to be carried out of all weld repairs</li> <li>• Verification of heat treatment procedure carried out for furnaces H-6 (Arbizu), report n° IN-17761.</li> </ul>  |                            |   |                             |                            |
| <i>Qualification expires:</i>  | December 2023  |                            |   |                             |                            |
| <b>Tested and qualified thickness and weight</b>   |  |                            |   |                             |                            |
| <i>Products and manufacturing process(es):</i>   | <i>Test record No.</i>   | <i>Tested thickness mm</i> | <i>Qualified thickness mm</i>   | <i>Test piece weight kg</i> | <i>Qualified weight kg</i> |
| Sand casting   | TR CK3MCuN 01  | 130                        | 130   | 645                         | All                        |
| <b>Qualification/acceptance signatures</b>   |  |                            |   |                             |                            |
| <i>Manufacturer:</i>   | <i>Prepared by/Date:</i> 12-12-2018<br><br><b>I. Ibarrola</b>   |                            | <i>Checked by/Date:</i> 12-12-2018<br><br><b>C. Blazquez</b> |                             |                            |
| The manufacturer and this QTR are evaluated and found to be in compliance with the requirements of NORSOK M-650 for supply of the above listed products and materials.<br><i>This acceptance does not exempt any purchaser from his responsibility to ensure that this qualification is valid for his products within the essential variables of NORSOK M-650.</i> |  |                            |   |                             |                            |
| <i>Qualified/Accepted by (company name /address):</i>  |  |                            | <i>Signature/Date:</i> 12/12/2018   |                             |                            |
| <br><b>AkerSolutions™</b><br>Aker Engineering & Technology AS<br>Reg.nr. 879 817 552  |  |                            |   |                             |                            |