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|---|---|--------------------------------|----------------------------|---|-----------------------------|----------------------------|---------------------|------------------------|-------------------|----------|--------------|------------|-------------------|----------|---------------------|--------------------|-------------------|---------|--------------|------------|-------------------|---------|--------------|--------------------|-------------------|--------------|--------------|------------|-------------------|
|  | Qualification Test Record (QTR) NORSOK M-650 | | QTR. No.: 04 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | Rev. No.: 07 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Manufacturer name/address/ Web page: | H. Butting GmbH & Co. KG, Gifhorner Str. 59, 29379 Wittingen-Knesebeck, Germany www.butting.de | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Reference standard | NORSOK M-650, Edition 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Material designation and MDS No.: | ASTM A928 Type 25Cr Duplex (PRE=>40) UNS S32750 Cl. 1/3/5 NORSOK M-630:2020 MDS D52 Rev. 6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Manufacturing Summary doc. No.: | D-04 | | | Rev. No.: 10 | | | | | | | | | | | | | | | | | | | | | | | | | |
| Products and manufacturing process(es): | Cold formed Stainless Steel Pipes, longitudinally welded by <table border="0"> <tr> <td>PAW/GTAW</td> <td>Double/single sided</td> <td>Induction HT (in line)</td> <td>Prod. route No. 1</td> </tr> <tr> <td>PAW/GTAW</td> <td>Double sided</td> <td>Furnace HT</td> <td>Prod. route No. 2</td> </tr> <tr> <td>PAW/GTAW</td> <td>Double/single sided</td> <td>Induction HT (391)</td> <td>Prod. route No. 3</td> </tr> <tr> <td>EB/GTAW</td> <td>Double sided</td> <td>Furnace HT</td> <td>Prod. route No. 4</td> </tr> <tr> <td>EB/GTAW</td> <td>Double sided</td> <td>Induction HT (391)</td> <td>Prod. route No. 5</td> </tr> <tr> <td>PAW/GTAW/SAW</td> <td>Double sided</td> <td>Furnace HT</td> <td>Prod. route No. 6</td> </tr> </table> | | | | | PAW/GTAW | Double/single sided | Induction HT (in line) | Prod. route No. 1 | PAW/GTAW | Double sided | Furnace HT | Prod. route No. 2 | PAW/GTAW | Double/single sided | Induction HT (391) | Prod. route No. 3 | EB/GTAW | Double sided | Furnace HT | Prod. route No. 4 | EB/GTAW | Double sided | Induction HT (391) | Prod. route No. 5 | PAW/GTAW/SAW | Double sided | Furnace HT | Prod. route No. 6 |
| PAW/GTAW | Double/single sided | Induction HT (in line) | Prod. route No. 1 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| PAW/GTAW | Double sided | Furnace HT | Prod. route No. 2 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| PAW/GTAW | Double/single sided | Induction HT (391) | Prod. route No. 3 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| EB/GTAW | Double sided | Furnace HT | Prod. route No. 4 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| EB/GTAW | Double sided | Induction HT (391) | Prod. route No. 5 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| PAW/GTAW/SAW | Double sided | Furnace HT | Prod. route No. 6 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Mandatory conditions and sub-contractors: | <ul style="list-style-type: none"> • Cold forming, Heat treatment, Pickling • Raw Material Suppliers <i>Plate:</i> Böhler, Outokumpu, ATI Allegheny, Industeel/ArcelorMittal, Nippon Yakin, SIJ Acroni <i>Coil:</i> Outokumpu, ATI Allegheny, Aperam, Nippon Yakin | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Other information: | <ul style="list-style-type: none"> • Test Laboratory accredited to ISO 17025 • Verification reports included in Section 3 • Qualification testing acc. to MDS D52 Rev.4, 5 or 6 however all testing also meets requirements of MDS D52 Rev.6 • Rev.01 - Qualification testing of PR no. 1, 2, 3 • Rev.02 - Qualification testing of PR no. 4 • Rev.03 - Qualification of raw material from Aperam (coil, PR no. 1) • Rev.04 - Qualification testing to extend qualified wall thickness of PR no. 3 • Rev.05 - Re-Qualification and Qualification of Prod. route No. 3, 5, 6 • Rev.06 - Qualification testing to extend qualified wall thickness of PR no. 2,3 • Rev.07 - Re-Qualification | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Qualification expires: | 14.03.2029 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Tested and qualified thickness and weight | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Products and manufacturing process(es): | Reference no. | Qualification order no. | Tested thickness mm | Qualified thickness mm | Test piece weight kg | Qualified weight kg | | | | | | | | | | | | | | | | | | | | | | | |
| Welded pipes / PR 1 | QTR-04/R1 | 1072329 | 5,00 | 6,25 | N/A | N/A | | | | | | | | | | | | | | | | | | | | | | | |
| Welded pipes / PR 1 | QTR-04/R1 | 1104101 | 4,57 | 5,71 | N/A | N/A | | | | | | | | | | | | | | | | | | | | | | | |
| Welded pipes / PR 2 | QTR-04/R2 | 1074579 | 9,53 | 10,48 | N/A | N/A | | | | | | | | | | | | | | | | | | | | | | | |
| Welded pipes / PR 2 | QTR-04/R2 | 1227058 | 23,80 | 29,75 | N/A | N/A | | | | | | | | | | | | | | | | | | | | | | | |
| Welded pipes / PR 3 | QTR-04/R3 | 1172669 | 15,09 | 18,86 | N/A | N/A | | | | | | | | | | | | | | | | | | | | | | | |
| Welded pipes / PR 3 | QTR-04/R3 | 1227060 | 19,10 | 23,87 | N/A | N/A | | | | | | | | | | | | | | | | | | | | | | | |
| Welded pipes / PR 4 | QTR-04/R4 | 1097274 | 32,40 | 40,00 | N/A | N/A | | | | | | | | | | | | | | | | | | | | | | | |
| Welded pipes / PR 5 | QTR-04/R5 | 1172491 | 15,09 | 18,86 | N/A | N/A | | | | | | | | | | | | | | | | | | | | | | | |
| Welded pipes / PR 6 | QTR-04/R6 | 1169067 | 23,83 | 29,79 | N/A | N/A | | | | | | | | | | | | | | | | | | | | | | | |
| Qualification/acceptance signatures | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Manufacturer: BUTTING GmbH & Co. KG | Prepared by/Date: Sigrun Claus / 06.03.2024 | | | Checked by/Date: Sabine Nagel / 06.03.2024 | | | | | | | | | | | | | | | | | | | | | | | | | |

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.
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.

Qualified/Accepted by (company name /address):

SFF

Scandinavian
Fittings & Flanges

Signature/Date: 06.03.2024

Vedle R. Østerhus