

| MATERIAL DATA SHEET | | | MDS R11 | Rev. 4 |
|---|---|--|----------------------|--------------------|
| TYPE OF MATERIAL: Austenitic stainless steel, Type 6Mo | | | | |
| PRODUCT | STANDARD | GRADE | ACCEPT. CLASS | SUPPL. REQ. |
| Seamless pipes | ASTM A 312 | UNS S31254 UNS N08367 UNS N08926 | - | - |
| 1. SCOPE | This MDS specifies the selected options in the referred standard and additional requirements which shall be added or supersede the corresponding requirements in the referred standard. | | | |
| 2. QUALIFICATION | Manufacturers and the manufacturing process used for manufacturing of product to this MDS shall be qualified in accordance with NORSOK Standard M-650. | | | |
| 3. MANUFACTURING | The manufacturing of products according to this MDS shall be carried out according to the M-650 qualified manufacturing procedure. | | | |
| 4. STEEL MAKING | The steel melt shall be refined by AOD or equivalent. | | | |
| 5. HEAT TREATMENT | The pipes shall be solution annealed followed by water quenching. | | | |
| 6. TENSILE TESTING | $R_{p0.2} \geq 310 \text{ MPa}$, $R_M \geq 675 \text{ MPa}$ for $t \leq 5,0 \text{ mm}$ and $R_M \geq 655 \text{ MPa}$ for $t > 5,0 \text{ mm}$, $A \geq 35 \%$ | | | |
| 7. CORROSION TESTING | <p>Corrosion test according to ASTM G 48 Method A is required. Test temperature shall be 50 °C and the exposure time 24 hours. The test shall expose the external and internal surfaces and a cross section surface in full wall thickness. Cut edges shall be prepared according to ASTM G48. The whole specimen shall be pickled before being weighed and tested. Pickling may be performed for 5 minutes at 60 °C in a solution of 20 % HNO_3 + 5 % HF.</p> <p>The acceptance criteria are:</p> <ul style="list-style-type: none"> - No pitting at 20 X magnification. - The weight loss shall be less than 4,0 g/m². | | | |
| 8. EXTENT OF TESTING | Corrosion test shall be carried out to the same extent as stated for mechanical tests in the referred standard. | | | |
| 9. TEST SAMPLING | Samples for production testing shall realistically reflect the properties in the actual components. | | | |
| 10. SURFACE FINISH | White pickled. | | | |
| 11. REPAIR OF DEFECTS | Weld repair is not acceptable. | | | |
| 12. MARKING | The component shall be marked to ensure full traceability to melt and heat treatment lot. | | | |
| 13. CERTIFICATION | <p>The material manufacturer shall have a quality system certified in accordance with ISO 9001 and the system shall have undergone a specific assessment for the relevant materials.</p> <p>The material certificate shall be issued in accordance with EN 10204 Type 3.1, and shall include the following information:</p> <ul style="list-style-type: none"> - Steel manufacturer; - Steel melting and refining practice; - Heat treatment condition. (Solution annealing temperature and holding time shall be stated.) | | | |