**ALLOY PIPES FOR HIGH TEMPERATURES**
**ASTM A335 - ASME SA335**

*Seamless pipes in low and high alloy steel*

**USE**
In high temperature, also suitable to be curved and flanged

**STEEL GRADE**
P5 - P9 - P11 - P22 - P91

**PROCESSING**
- Seamless

**MATERIAL**
Steel alloys, mainly characterized by chrome-molybdenum
According to the requirements if standards, the pipes shall be supplied heat treated

**TOLERANCES**

<table>
<thead>
<tr>
<th>Thickness (mm)</th>
<th>Tolerance %</th>
</tr>
</thead>
<tbody>
<tr>
<td>10,3 &lt; D ≤ 73,0; all ratios t/D</td>
<td>+20,0</td>
</tr>
<tr>
<td>D &gt;73; t/D ≤5%</td>
<td>+22,5</td>
</tr>
<tr>
<td>D &gt;73; t/D &gt;5%</td>
<td>+15,0</td>
</tr>
</tbody>
</table>

**OUTSIDE DIAMETER**

<table>
<thead>
<tr>
<th>Diameter (mm)</th>
<th>Tolerance (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>10,3 &lt; D ≤ 48,3</td>
<td>+0,40</td>
</tr>
<tr>
<td>48,3 &lt; D ≤ 114,3</td>
<td>+0,79</td>
</tr>
<tr>
<td>114,3 &lt; D ≤ 219,1</td>
<td>+1,59</td>
</tr>
<tr>
<td>219,1 &lt; D ≤ 323,8</td>
<td>+2,38</td>
</tr>
<tr>
<td>D &gt;323,8</td>
<td>+/- 1% of the specific outside diameter</td>
</tr>
</tbody>
</table>

**OUT OF ROUNDNESS**
Within the tolerance limits for the outside diameter

**MASS**
The mass per unit of length for pipes ≤323,8mm must not vary by +10% / − 3,5% from the values specified
For pipes >323,8mm the mass per unit of length must not vary by + 10% / − 5% from the values specified
The benchmark parameters must be identified in the ANSI B36.10 and ANSI B36.19 standards and for non-standardized sizes the following equation must be applied:
\[ M = t(D− t) \times C \]

**STRAIGHTNESS**
- Reasonably straight
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MARKING

Pipes with \( D \leq 48.3 \text{mm} \) will be identified by means of a label applied to one end of the bundle.
Pipes with \( D > 48.3 \text{mm} \) will be marked legibly 300mm from one end with the following information:

- Manufacturer's name or trademark
- Reference standard
- Steel grade
- Diameter and thickness
- Length
- Cast number
- Mark the following symbols in the cases specified below:
  - EC: eddy-current test
  - UT: ultrasonic test
  - FL: flux leakage test
  - Value of the pressure used for the hydrostatic test:
  - Hydrostatic test

CERTIFICATION

UNI EN 10204

SIZE

ASME B36.10

RANGE