

PIPES FOR PIPELINES UNI EN 10208-1

Seamless and welded pipes for piping systems

USE	Oil and natural gas industry
STEEL GRADE	L210GA - L235GA - L245GA - L290GA - L360GA
PROCESSING	<ul style="list-style-type: none"> ➤ Seamless ➤ Longitudinal or helical welded (EW-SAW-COW-BW)

TOLERANCES

THICKNESS OF SEAMLESS MATERIAL*

Thickness (mm)	Tolerance (mm)
$t \leq 4$	+0,6 / -0,5
$4 < t < 25$	+15% / -12,5%
$t \geq 25$	+ 3,75 / 3,0 or +/- 10% whichever is the larger

*For outside diameters $D \geq 355,6\text{mm}$ it is permitted to exceed the upper wall thickness locally by a further 5% of the wall thickness t

THICKNESS OF WELDED MATERIAL

Thickness (mm)	Tolerance (mm)
$t \leq 10$	+1,0 / -0,5
$10 < t < 20$	+10% / -5 %
$t \geq 20$	+2,0 / -1,0

OUTSIDE DIAMETER SEAMLESS AND WELDED MATERIAL⁽¹⁾

Diameter (mm)	Pipe body	
	Seamless	Welded
$D \leq 60$	+/- 0,5mm or +/- 0,75% D	+/- 0,5mm or 0,75% D (max +/- 3mm)
$60 < D \leq 610$		
$610 < D \leq 1430$	+/- 1% D	0,5%D (max +/- 4mm)
$D > 1430$	as agreed	
Pipe ends ⁽²⁾		
Diameter (mm)	Seamless	Welded
$D \leq 60$	+/- 0,5mm or +/- 0,5% D ⁽³⁾ with max +/- 1,6mm	
$60 < D \leq 610$		
$610 < D \leq 1430$	+/- 2,0mm ⁽⁴⁾	+/- 1,6mm ⁽⁴⁾
$D > 1430$	as agreed ⁽⁴⁾	

OUT OF ROUNDNESS⁽¹⁾

Diameter (mm)	Pipe body	Pipe ends ^{(2),(5)}
$D \leq 60$	Included in diameter tolerances	
$60 < D \leq 610$	2%	1,5%
$610 < D \leq 1430$	1,5% (max 15mm) for $D/t \leq 75$ 2% for $D/t > 75$	1% for $D/t \leq 75$; 1,5% for $D/t > 75$
$D > 1430$		as agreed ⁽⁴⁾

(1) The end of the pipe should be considered as included in a length of 100mm

(2) For seamless material the value is applied for thickness of $t \leq 25\text{mm}$; for larger thickness as for agreements

(3) Subject to agreements, the tolerance may be applied inside the diameter for $D > 210\text{mm}$

(4) Unless otherwise agreed, the diameter tolerance applies to the inside diameter

(5) When the diameter tolerance is applied to the internal diameter, the internal diameter must also be the basis for the out of roundness requirements

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MASS

The mass for each pipe must not deviate from the result of the following formula:

$$M = t(D-t) \times C$$

The basis of the formula is worked out by considering a density equal to 7,85 Kg/dm³

STRAIGHTNESS

- ≤ 0,2% on the whole length of the pipe
- Local variations on straightness must be ≤4mm/m

MARKING

Marking must include the following information:

- Manufacturer's name or trademark
- Number of current European standard
- Name of steel
- Initial S (seamless) or W (welded) according to the manufacturing process

Any additional requests shall be agreed in the order phase
Unless otherwise agreed, the marking must be applied indelibly as follows:

- $D \leq 48,3\text{mm}$ the information may be shown on a label attached to the bundles, or alternatively it can be marked on one end
- All other seamless sizes and welded pipes with $D < 406,4\text{mm}$ marking must be made between 450mm and 750mm from one end
- Welded pipes with $D \geq 406,4\text{mm}$ marking must be made inside the pipe starting from 150mm from one end

CERTIFICATION UNI EN 10204

SIZE RANGE UNI EN 10220