



沧州博拓国际贸易有限公司

Cangzhou Botop International Co.,Ltd.
















# API 5L X60 Specification

- LSAW Steel Pipe

<https://www.botopsteelpipe.com>

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## What is API 5L Grade X60 Material?



- 🔍 **API 5L X60 (L415)** is a line pipe with a minimum yield strength of 60,200 (415 MPa) for use in pipeline transportation systems in the oil and gas industry.
- 🔍 X60 can be seamless or many types of welded steel tubing, commonly LSAW (SAWL), SSAW (SAWH), and ERW.
- 🔍 Due to its high strength and durability, the X60 pipeline is often used for long-distance trans-regional pipelines or transportation tasks through complex terrains and other demanding environments.



## About Us



**Botop Steel** is a professional manufacturer of thick-walled large-diameter double-sided submerged arc LSAW steel pipe located in China.

- Location: Cangzhou City, Hebei Province, China;
- Total Investment: 500 million RMB;
- Factory area: 60,000 square meters;
- Annual production capacity: 200,000 tons of JCOE LSAW steel pipes;
- Equipment: Advanced production and testing equipment;
- Specialization: LSAW steel pipe production;
- Certification: API 5L certified.



# Delivery Conditions



Depending on the delivery conditions and PSL level, the X60 can be categorized as follows:

**PSL1: x60 or L415;**

**PSL2: X60N, X60Q, X60M or L415N, L415Q, L415M.**

PSL	Delivery Condition	Pipe Grade/Steel Grade	
PSL1	As-rolled, normalizing rolled, thermomechanical rolled, thermomechanical formed, normalizing formed, normalized, normalized and tempered or quenched and tempered	X60	L415
PSL2	Normalizing rolled, normalizing formed, normalized, or normalized and tempered	X60N	L415N
	Quenched and tempered	X60Q	L415Q
	Thermomechanical rolled or thermomechanical formed	X60M	L415M

N: Indicates normalization of the material.

Q: Stands for Quenching and Tempering.

M: Indicates thermo-mechanical treatment.

# API 5L X60 Manufacturing Process



## Acceptable steel tube manufacturing process for X60

API 5L PSL1 X60	SMLS	LFW	HFW	LW	SAWL	SAWH	COWL	COWH
API 5L PSL2 X60	SMLS	—	HFW	—	SAWL	SAWH	COWL	COWH

If you find these abbreviations difficult to understand, check out our compilation of articles on [common abbreviations for steel pipes](#).

## Advantages of SAWL (LSAW)

- 🎤 If you need large diameter thick wall steel pipe, the first choice is SAWL (LSAW) steel pipe. LSAW steel pipe can be produced in sizes up to 1500mm in diameter and 80mm in wall thickness, which is fully capable of meeting the needs of long-distance pipelines for large-scale projects.
- 🎤 In addition, during the production process, LSAW steel pipe adopts double-sided submerged arc welding (DSAW) process, which ensures the quality of the weld seam.

## Pipe End Types for API 5L X60



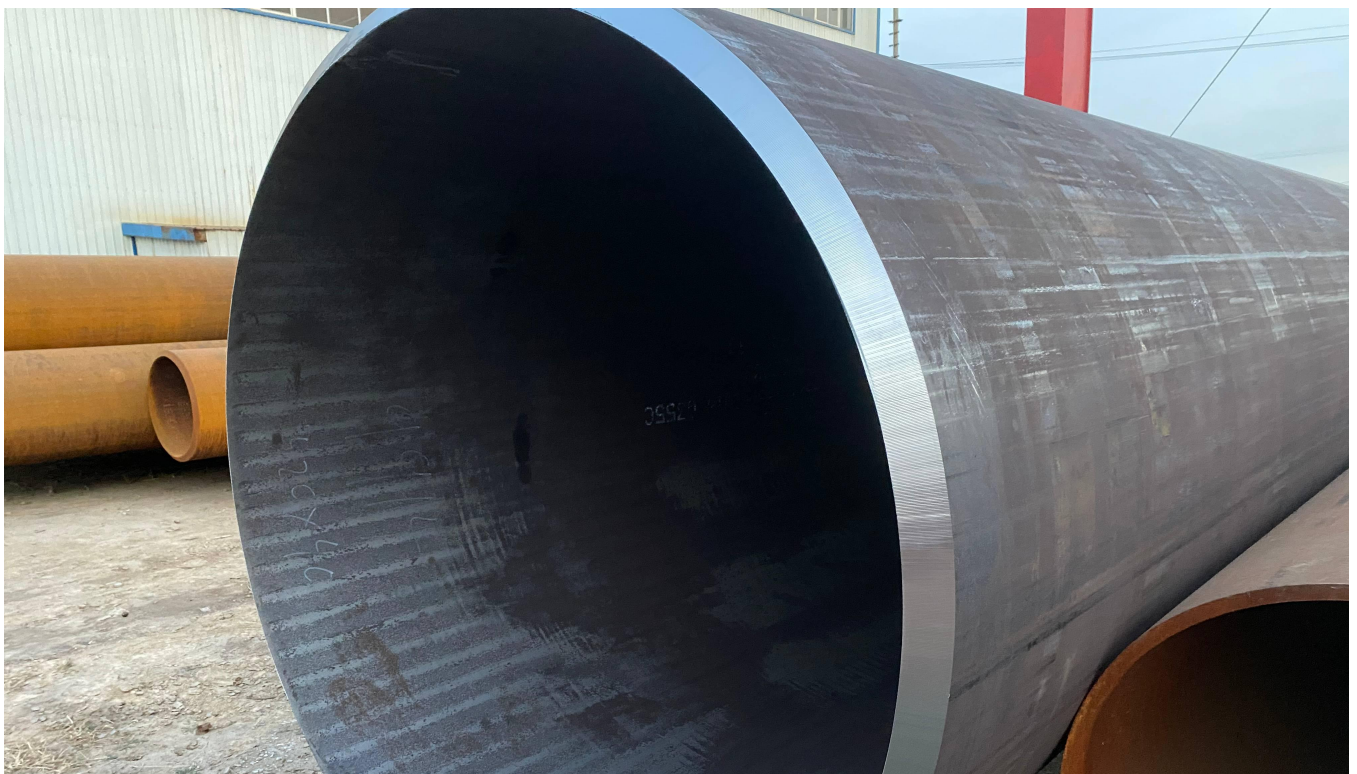
**PSL1 Steel Pipe End: Belled end or Plain end;**

**PSL2 Steel Pipe End: Plain end;**

For plain pipe ends the following requirements should be followed:

The end faces of  $t \leq 3.2$  mm (0.125 in) plain end pipe shall be square cut.

Plain-end tubes with  $t > 3.2$  mm (0.125 in) shall be beveled for welding. The bevel angle should be  $30-35^\circ$  and the width of the root face of the bevel should be 0.8 - 2.4 mm (0.031 - 0.093 in).



# API 5L X60 Chemical Composition



PSL1 is much simpler than PSL2 in terms of chemical composition, mechanical properties, and other requirements.

This is because PSL1 represents the standard level of quality for pipeline steel pipe, while PSL2 can be seen as an upgraded version of PSL1, which offers more advanced specifications and stricter quality control.

## Chemical Composition for PSL 1 Pipe with $t \leq 25.0$ mm (0.984 in.)

Steel Grade	Pipe Type	Mass Fraction, Based on Heat and Product Analyses <sup>a,g</sup> , %						
		C	Mn	P	S	V	Nb	Ti
		max <sup>b</sup>	max <sup>b</sup>	max	max	max	max	max
X60 (L415)	Seamless Pipe	0.28 <sup>e</sup>	1.40 <sup>e</sup>	0.03	0.03	f	f	f
X60 (L415)	Welded Pipe	0.26 <sup>e</sup>	1.40 <sup>e</sup>	0.03	0.03	f	f	f

<sup>a</sup> Cu  $\leq$  0.50 %; Ni  $\leq$  0.50 %; Cr  $\leq$  0.50 % and Mo  $\leq$  0.15 %.  
<sup>b</sup> For every 0.01 % decrease in carbon content from the specified maximum carbon content, the permitted manganese content is increased by 0.05 % from the specified maximum manganese content. For X60, the maximum manganese content is 1.75 %;  
<sup>e</sup> Unless otherwise agreed.  
<sup>f</sup> Unless otherwise agreed, Nb + V + Ti  $\leq$  0.15%.  
<sup>g</sup> No deliberate addition of B is permitted and the residual B  $\leq$  0.001 %.

## Chemical Composition for PSL 2 Pipe with $t \leq 25.0$ mm (0.984 in.)

Steel Grade	Pipe Type	Mass Fraction, Based on Heat and Product Analyses % max									Carbon Equivalent <sup>a</sup> %max	
		C <sup>b</sup>	Si	Mn <sup>b</sup>	P	S	V	Nb	Ti	Other	CE <sub>low</sub>	CE <sub>psm</sub>
X60N (L415N)	Seamless and Welded Pipe	0.24	0.45 <sup>f</sup>	1.40 <sup>f</sup>	0.025	0.015	0.10 <sup>f</sup>	0.05 <sup>f</sup>	0.04 <sup>f</sup>	g,h,l	As agreed	
X60Q (L415Q)		0.18 <sup>f</sup>	0.45 <sup>f</sup>	1.70 <sup>f</sup>	0.025	0.015	g	g	g	h,l	0.43	0.25
X60M (L415M)	Welded Pipe	0.12 <sup>f</sup>	0.45 <sup>f</sup>	1.60 <sup>f</sup>	0.025	0.015	g	g	g	h,l	0.43	0.25

<sup>a</sup> Based on product analysis, for seamless pipe with  $t > 20.0$  mm (0.787 in.), the CE limits shall be as agreed; the CE<sub>low</sub> limits apply if C > 0.12 % and the CE<sub>psm</sub> limits apply if C  $\leq$  0.12 %.  
<sup>b</sup> For every 0.01 % decrease in carbon content from the specified maximum carbon content, the permitted manganese content is increased by 0.05 % from the specified maximum manganese content. For X60, the maximum manganese content is 1.75 %.  
<sup>f</sup> Unless otherwise agreed.  
<sup>g</sup> Unless otherwise agreed, Nb + V + Ti  $\leq$  0.15%.  
<sup>h</sup> Unless otherwise agreed, Cu  $\leq$  0.50 %; Ni  $\leq$  0.50 %; Cr  $\leq$  0.50 % and Mo  $\leq$  0.50 %.  
<sup>l</sup> Unless otherwise agreed no intentional addition of B is permitted and residual B < 0.001 %.



## API 5L X60 Chemical Composition



For PSL2 steel pipe products analyzed with a **carbon content of  $\leq 0.12\%$** , the carbon equivalent  $CE_{pcm}$  can be calculated using the following formula:

$$CE_{pcm} = C + \frac{Si}{30} + \frac{Mn}{20} + \frac{Cu}{20} + \frac{Ni}{60} + \frac{Cr}{20} + \frac{Mo}{15} + \frac{V}{15} + 5B$$

For PSL2 steel pipe products analyzed with a **carbon content  $> 0.12\%$** , the carbon equivalent  $CE_{llw}$  can be calculated using the formula below:

$$CE_{llw} = C + \frac{Mn}{6} + \frac{(Cr + Mo + V)}{5} + \frac{(Ni + Cu)}{15}$$

### Chemical Composition with $t > 25.0$ mm (0.984 in.)

It shall be determined by negotiation and modified to a suitable composition based on the chemical composition requirements above.

# API 5L X60 Mechanical Properties



## Tensile Properties

### PSL1 X60 Tensile Properties

Pipe Grade	Pipe Body of Seamless and Welded Pipe			Weld Seam of EW, LW, SAW, and COW Pipe
	Yield Strength $R_{10.5}$ psi(MPa), min	Tensile Strength $R_m$ psi(MPa), min	Elongation (on 50 mm or 2 in.) $A_f$ %, min	Tensile Strength $R_m$ psi(MPa), min
X60 (L415)	60,200 (415)	75,400 (520)	Note	75,400 (520)

### PSL2 X60 Tensile Properties

Pipe Grade	Pipe Body of Seamless and Welded Pipe					Weld Seam of HFW SAW and COW Pipe	
	Yield Strength $R_{10.5}$ psi (MPa)		Tensile Strength $R_m$ psi (MPa)		Ratio <sup>a</sup> $R_{10.5}/R_m$	Elongatio (on 50 mm or 2 in.) $A_f$ %	Tensile Strength $R_m$ psi (MPa)
	min	max	min	max	max	min	min
X60N (L415N) X60Q (L415Q) X60M (L415M)	60,200 (415)	81,900 (565)	75,400 (520)	110,200 (760)	0.93	Note	75,400 (520)

<sup>a</sup> This limit applies for pipe with D > 323.9 mm (12.750 in.).

**Note:** The specified minimum elongation,  $A_f$  shall be as determined using the following equation:

$$A_f = C \times (A_{xc}^{0.2}/U^{0.9})$$

# API 5L X60 Mechanical Properties



## Other Mechanical Experiments

The following experimental program applies to SAW steel pipe types only.

**Weld guide bending test;**

**Cold-formed welded pipe hardness test;**

**Macro inspection of welded seam;**

**and only for PSL2 steel pipe: CVN impact test and DWT test.**

Test items and test frequencies for other pipe types can be found in Tables 17 and 18 of the API 5L standard.

# Hydrostatic Test



## Test Time

All sizes of seamless and welded steel tubes with  $D \leq 457$  mm (18 in.): test time  $\geq 5$ s;

Welded steel pipe  $D > 457$  mm (18 in.): test time  $\geq 10$ s.

## Test Frequency

**Each steel pipe** and there shall be no leakage from the weld or pipe body during the test.

## Test pressures

The hydrostatic test pressure  $P$  of a plain-end steel pipe can be calculated by using the formula.

$$P = 2St/D$$

$S$  is the hoop stress. the value is equal to the specified minimum yield strength of the steel pipe x a percentage, in MPa (psi);

Pipe Grade	Specified Outside Diameter D mm (in.)	Percentage of Specified Minimum Yield Strength for Determination of S	
		Standard Test Pressure	Alternative Test Pressure
X70	$\leq 141.3$ (5.563)	60 <sup>b</sup>	75 <sup>c</sup>
	$> 141.3$ (5.563) to 219.1 (8.625)	75 <sup>b</sup>	75 <sup>c</sup>
	$> 219.1$ (8.625) to 508 (20)	85 <sup>b</sup>	85 <sup>c</sup>
	$\geq 508$ (20)	90 <sup>b</sup>	90 <sup>c</sup>

<sup>b</sup> It is not necessary that the test pressure exceed 20.5 MPa (2970 psi).

<sup>c</sup> For  $D \leq 406.4$  mm (16.000 in.), it is not necessary that the test pressure exceed 50.0 MPa (7260 psi); for  $D > 406.4$  mm (16.000 in.), it is not necessary that the test pressure exceed 25.0 MPa (3630 psi).

## Hydrostatic Test



$t$  is the specified wall thickness, expressed in millimeters (inches);

$D$  is the specified outside diameter, expressed in millimeters (inches).



## Nondestructive Inspection



For **SAW tubes**, two methods, **UT** (ultrasonic testing) or **RT** (radiographic testing), are usually used.

ET (electromagnetic testing) is not applicable to SAW tubes.

Welded seams on welded pipes of grades  $\geq$  L210/A and diameters  $\geq$  60.3 mm (2.375 in) shall be nondestructively inspected for full thickness and length (100 %) as specified.



# API 5L Pipe Schedule Chart



For ease of viewing and use, we have organized the relevant schedule PDF files.  
You can always download and view these documents if needed.

 [API 5L Pipe Schedule Chart](#)

# Specify Outside Diameter and Wall Thickness



Standardized values for specified outside diameters and specified wall thicknesses of steel pipe are given in **ISO 4200** and **ASME B36.10M**.

Permissible Specified Outside Diameter and Specified Wall Thickness		
Specified Outside Diameter D mm (in.)	Specified Wall Thickness t mm (in.)	
	Special Light Sizes <sup>a</sup>	Regular Sizes
≥ 10.3 (0.405) to < 13.7 (0.540)	—	≥ 1.7 (0.068) to ≤ 2.4 (0.094)
≥ 13.7 (0.540) to < 17.1 (0.675)	—	≥ 2.2 (0.088) to ≤ 3.0 (0.118)
≥ 17.1 (0.675) to < 21.3 (0.840)	—	≥ 2.3 (0.091) to ≤ 3.2 (0.125)
≥ 21.3 (0.840) to < 26.7 (1.050)	—	≥ 2.1 (0.083) to ≤ 7.5 (0.294)
≥ 26.7(1.050) to < 33.4 (1.315)	—	≥ 2.1 (0.083) to ≤ 7.8 (0.308)
≥ 33.4(1311}5) to < 48.3 (1.900)	—	≥ 2.1 (0.083) to ≤ 10.0 (0.394)
≥ 48.3 (1.900) to < 60.3 (2.375)	—	≥ 2.1 (0.083) to ≤ 12.5 (0.492)
≥ 60.3 (2.375) to < 73.0 (2.875)	≥ 2.1 (0.083) to ≤ 3.6 (0.141)	> 3.6 (0.141) to ≤ 14.2 (0.559)
≥ 73.0 (2.875) to < 88.9 (3.500)	≥ 2.1 (0.083) to ≤ 3.6 (0.141)	> 3.6 (0.141) to ≤ 20.0 (0.787)
≥ 88.9 (3.500) to < 101.6 (4.000)	≥ 2.1 (0.083) to ≤ 4.0 (0.156)	> 4.0 (0.156) to ≤ 22.0 (0.866)
≥ 101.6(4.000) to < 168.3 (6.625)	≥ 2.1 (0.083) to ≤ 4.0 (0.156)	> 4.0(0.156) to ≤ 25.0 (0.984)
≥ 168.3 (6.625) to < 219.1 (8.625)	≥ 2.1 (0.083) to ≤ 4.0 (0.156)	> 4.0 (0.156) to ≤ 40.0(1.575)
≥ 219.1 (8.625) to < 273.1 (10.750)	≥ 3.2 (0.125) to ≤ 4.0 (0.156)	> 4.0 (0.156) to ≤ 40.0 (1.575)
≥ 273.1 (10.750) to < 323.9 (12.750)	≥ 3.6 (0.141) to ≤ 5.2 (0.203)	> 5.2 (0.203) to ≤ 45.0 (1.771)
≥ 323.9 (12.750) to < 355.6 (14.000)	≥ 4.0 (0.156) to ≤ 5.6 (0.219)	> 5.6 (0.219) to ≤ 45.0 (1.771)
≥ 355.6 (14.000) to < 457 (18.000)	≥ 4.5 (0.177) to ≤ 7.1 (0.281)	> 7.1 (0.281) to ≤ 45.0 (1.771)
≥ 457 (18.000) to < 559 (22.000)	≥ 4.8 (0.188) to ≤ 7.1 (0.281)	> 7.1 (0.281) to ≤ 45.0(1.771)
≥ 559 (22.000) to < 711 (28.000)	≥ 5.6 (0.219) to ≤ 7.1 (0.281)	> 7.1 (0.281) to ≤ 45.0 (1.771)
≥ 711 (28.000) to < 864 (34.000)	≥ 5.6 (0.219) to ≤ 7.1 (0.281)	> 7.1 (0.281) to ≤ 52.0 (2.050)
≥ 864 (34.000) to < 965 (38.000)	—	≥ 5.6 (0.219) to ≤ 52.0 (2.050)
≥ 965 (38.000) to < 1422 (56.000)	—	≥ 6.4 (0.250) to ≤ 52.0 (2.050)
≥ 1422 (56.000) to < 1829 (72.000)	—	≥ 9.5 (0.375) to ≤ 52.0 (2.050)
≥ 1829 (72.000) to < 2134(84.000)	—	≥ 10.3 (0.406) to ≤ 52.0 (2.050)

<sup>a</sup> Pipe having the combination of specified outside diameter and specified wall thickness is defined as special light size pipe; other combinations given in this table are defined as regular size pipe.



# Dimensional Tolerances



## 💬 Tolerances for Diameter and Out-of-roundness

The diameter of a steel pipe is defined as the circumference of the pipe in any circumferential plane divided by  $\pi$ .

Specified Outside Diameter D mm (in.)	Diameter Tolerances mm (in.)				Out-of-roundness Tolerances mm (in.)	
	Pipe Except the End <sup>a</sup>		Pipe End <sup>a,b,c</sup>		Pipe Except the End <sup>a</sup>	Pipe End <sup>a,b,c</sup>
	SMLS Pipe	Welded Pipe	SMLS Pipe	Welded Pipe		
< 60.3 (2.375)	-0.8 (0.031) to +0.4 (0.016)		-0.8 (0.031) to +0.4 (0.016)		1.2 (0.048)	1.2 (0.036)
≥ 60.3 (2.375) to 168.3 (6.625)	±0.0075D		-0.4 (0.016) to +1.6 (0.063)		0.020D for D/t ≤ 75; by agreement for D/t > 75	0.015D for D/t ≤ 75; by agreement for D/t > 75
≥ 168.3 (6.625) to 610 (24.000)	±0.0075D	±0.0075D, but maximum of ±3.2 (0.125)	±0.005D, but maximum of ±1.6 (0.063)		0.020D	0.015D
≥ 610 (24.000) to 1422 (56.000)	±0.01D	±0.005D, but maximum of ±14.0 (0.063)	±2.0 (0.079)	± 1.6 (0.063)	0.015D, but maximum of 15 (0.6) for D/t ≤ 75; by agreement for D/t > 75	0.01D, but maximum of 13 (0.5) for D/t ≤ 75; by agreement for D/t > 75
> 1422 (56.000)	As agreed					

<sup>a</sup> The pipe end includes a length of 100 mm (4.0 in.) at each of the pipe extremities.  
<sup>b</sup> For SMLS pipe, the tolerances apply for t < 25.0 mm (0.984 in.), and the tolerances for thicker pipe shall be as agreed.  
<sup>c</sup> For expanded pipe with D ≥ 219.1 mm (8.625 in.) and for nonexpanded pipe, the diameter tolerance and the out-of-roundness tolerance may be determined using the calculated inside diameter (the specified outside diameter minus two times the specified wall thickness) or measured inside diameter rather than the specified outside diameter (see 10.2.8.3).

# Dimensional Tolerances



## Tolerances for Wall Thickness

Wall Thickness t mm (in.)	Tolerances <sup>a</sup> mm (in.)
<b>SMLS Pipe<sup>b</sup></b>	
≤ 4.0 (0.157)	+0.6 (0.024) -0.5 (0.020)
> 4.0 (0.157) to < 25.0 (0.984)	+0.150t -0.125t
≥ 25.0 (0.984)	+3.7 (0.146) or +0.1t, whichever is the greater -3.0 (0.120) or -0.1t, whichever is the greater
<b>Welded Pipe<sup>c, d</sup></b>	
≤ 5.0 (0.197)	±0.5 (0.020)
> 5.0 (0.197) to < 15.0 (0.591)	±0.1t
≥ 15.0 (0.591)	±1.5 (0.060)
<p><sup>a</sup> If the purchase order specifies a minus tolerance for wall thickness smaller than the applicable value given in this table, the plus tolerance for wall thickness shall be increased by an amount sufficient to maintain the applicable tolerance range.</p> <p><sup>b</sup> For pipe with D ≥ 355.6 mm (14.000 in.) and t ≥ 25.0 mm (0.984 in.), the wall thickness tolerance locally may exceed the plus tolerance for wall thickness by an additional 0.05t, provided that the plus tolerance for mass (see 9.14) is not exceeded.</p> <p><sup>c</sup> The plus tolerance for wall thickness does not apply to the weld area.</p> <p><sup>d</sup> See 9.13.2 for additional restrictions.</p>	

# Dimensional Tolerances



## 🗨️ Tolerance for Length

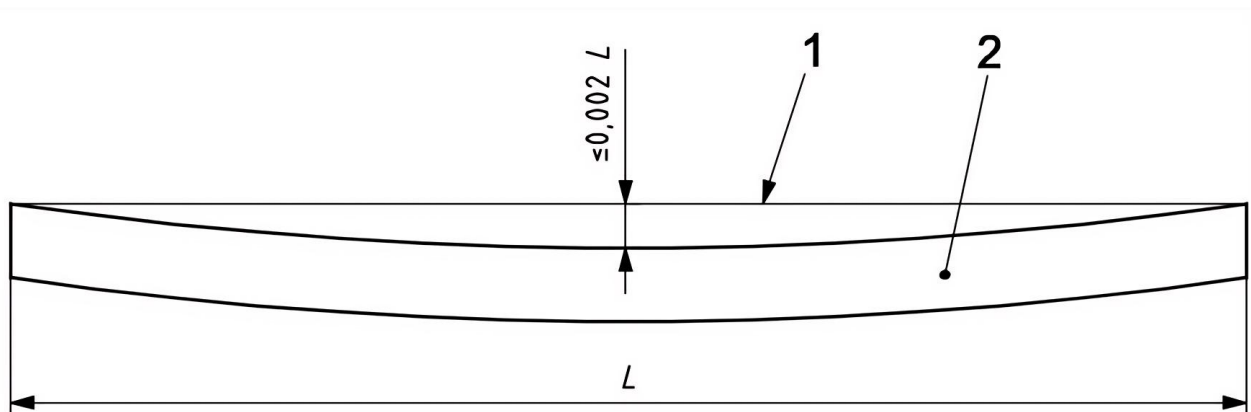
Approximate lengths shall be delivered within a tolerance of ±500 mm (20 in.).

Tolerances for **random length**:

Random Length Designation m (ft)	Minimum Length m (ft)	Minimum Average Length for Each Order Item m (ft)	Maximum Length m (ft)
<b>Threaded-and-coupled Pipe</b>			
6 (20)	4.88 (16.0)	5.33 (17.5)	6.86 (22.5)
9 (30)	4.11 (13.5)	8.00 (26.2)	10.29 (33.8)
12 (40)	6.71 (22.0)	10.67 (35.0)	13.72 (45.0)
<b>Plain-end Pipe</b>			
6 (20)	2.74 (9.0)	5.33 (17.5)	6.86 (22.5)
9 (30)	4.11 (13.5)	8.00 (26.2)	10.29 (33.8)
12 (40)	4.27 (14.0)	10.67 (35.0)	13.72 (45.0)
15 (50)	5.33 (17.5)	13.35 (43.8)	16.76 (55.0)
18 (60)	6.40 (21.0)	16.00 (52.5)	19.81 (65.0)
24 (80)	8.53 (28.0)	21.34 (70.0)	25.91 (85.0)

## 🗨️ Tolerance for Straightness

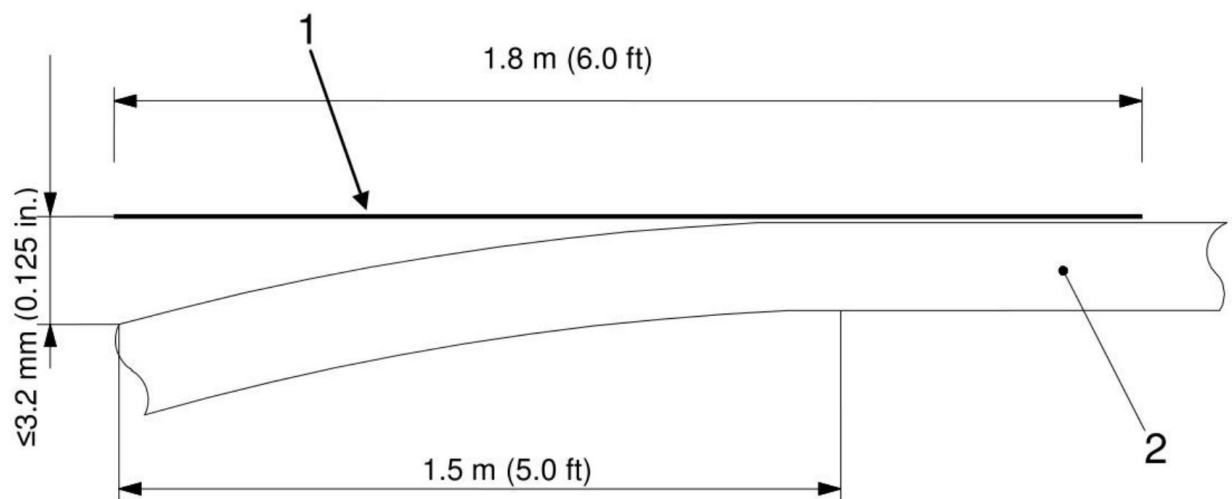
Straightness deviation over the entire length of the tube:  $\leq 0.200 L$ ;



# Dimensional Tolerances



Straightness deviation of 1.5 m (5.0 ft) pipe end of steel pipe:  $\leq 3.2\text{mm}$  (0.125 in.).

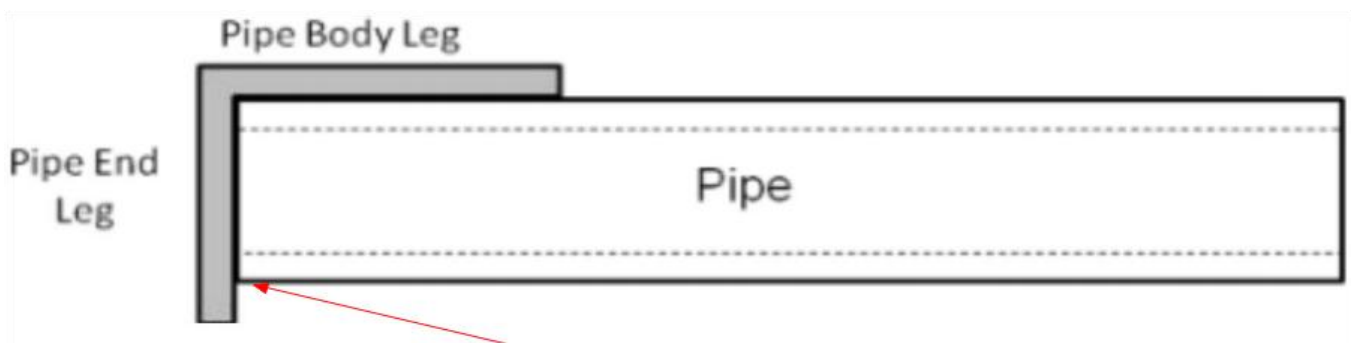


- Key**
- 1 straight line
  - 2 pipe

Figure 2—Measuring End Straightness

## 🗨️ Tolerance for Straightness

The out-of-squareness shall be  $< 1.6\text{ mm}$  (0.063 in.). The out-of-squareness is measured as the gap between the end of the pipe and the pipe end leg.



# Dimensional Tolerances



## Tolerances for the Weld Seam

**Maximum Permissible Radial Offset** for SAW and COW Pipe.

Specified Wall Thickness $t$ mm (in.)	Maximum Permissible Radial Offset <sup>a</sup> mm (in.)
$\leq 15.0$ (0.590)	1.5 (0.060)
$> 15.0$ (0.590) to 25.0 (0.984)	0.1t
$> 25.0$ (0.984)	2.5 (0.098)

<sup>a</sup> These limits apply also to strip/plate end welds

**Maximum Permissible Weld Bead Height** for SAW and COW Pipe (Except at Pipe Ends).

Specified Wall Thickness mm (in.)	Weld Bead Height mm (in.) maxim	
	Internal Bead	External Bead
$\leq 13.0$ (0.512)	3.5 (0.138)	3.5 (0.138)
$> 13.0$ (0.512)	3.5 (0.138)	4.5 (0.177)

The weld shall have a smooth transition to the surface of the adjacent steel pipe.

Pipe end welds are to be ground to a length of 100 mm (4.0 in.) with a residual weld height of  $\leq 0.5$  mm (0.020 in.).

## Dimensional Tolerances



### Tolerances for Mass

#### **Each steel pipe:**

- a) for special light size pipe: -5.0% - +10.0%;
- b) for pipe in Grade L175, L175P, A25, and A25P: -5.0% - +10.0%;
- c) for all other pipes: -3.5% - +10.0%.

#### **Pipe per lot ( $\geq$ 18 tons (20 tons) for order lot):**

- a) for grades L175, L175P, A25, and A25P: -3.5 %;
- b) for all other grades: -1.75 %.

# What is X60 Steel Equivalent to?



API 5L		EN 10027-2	ISO 3183
X60	L415	1.8725	X60
X60N	L415N	1.8736	X60N
X60Q	L415Q	1.8742	X60Q
X60M	L415M	1.8752	X60M

# Difference Between API 5L X60 and X65



Items	API 5L X60	API 5L X65
PSL2 Delivery condition	N, Q, and M	Q and M
Permitted manufacturing processes	Require the same	
Chemical composition	Same conditions, slight difference between the two grades	
Minimum yield strength	60,200 psi (415 MPa)	65,300 psi (450 MPa)
Minimum tensile strength	75,400 psi (520 MPa)	77,600 psi (535 MPa)



## Our Supply Range



- ★ Standard: API 5L or ISO 3183;
- ★ PSL1: X60 or L415;
- ★ PSL2: X60N, X60Q, X60M or L415N, L415Q, L415M;
- ★ Pipe Type: Welded Carbon Steel Pipe;
- ★ Manufacturing Process: LSAW, SAWL or DSAW;
- ★ Outer Diameter: 350 – 1500;
- ★ Wall Thickness: 8 - 80mm;
- ★ Length: Approximate lengths or random length;
- ★ Pipe Schedules: SCH10, SCH20, SCH30, SCH40, SCH60, SCH80, SCH100, SCH120, SCH140 and SCH160.
- ★ Identification: STD, XS, XXS;
- ★ Coating: Paint, varnish, 3LPE, FBE, 3LPP, HDPE, galvanized, epoxy zinc-rich, cement weighted, etc.
- ★ Packing: Waterproof cloth, wooden case, steel belt or steel wire bundling, plastic or iron pipe end protector, etc. Customized.
- ★ Matching Products: Bends, flanges, pipe fittings, and other matching products are available.

## Our Supply Range



In addition to high quality API 5L X60 steel pipe, we can also provide a wide range of pipe coatings to meet the needs of different projects.



## Our Supply Range



Several different packaging methods for steel tubes:

