

## PIPE SPECIFICATIONS

### Scope

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**AP15L** Covers SEAMLESS and WELDED LINE PIPE in nominal sizes and walls through 12 inch or by OUTSIDE DIAMETERS and nominal walls in all sizes. Dimensions may be specified in English or metric units. Pipe to this specification is suitable for use in conveying gas, water, and oil in the oil and natural gas industries.

1/8" - 48"  
STD, XS AND  
XXS

Other sizes and dimensions may be furnished

### Hydrostatic Testing

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Lists STANDARD and higher ALTERNATIVE hydrostatic mill inspection test pressures. Each length of pipe must be tested. Welded pipe is struck while under pressure near the weld at both ends of the pipe.

### Permissible Variations in Weights Per Foot

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#### For STD, XS, XXS and other REGULAR weights

Pipe shall not vary more than 10 percent over and 3.5 percent under weights shown in tables.

#### For SPECIAL weights

Pipe shall not vary more than 10 percent over and 5 percent under weights shown in tables.

In carload (40,000 lbs) lots, weight of total pipe in car shall be not less than 1.75 percent under the calculated weight of total footage in the car.

Sizes 4-1/2 inch OD and smaller may be weighed in convenient lots.

Sizes 5-9/16 inch OD and larger shall be weighed individually.

**PIPE SPECIFICATIONS**

**Permissible Variations in OD**

<b>AP15L</b>			
OUTSIDE DIAMETER shall not vary more than:			
1/8" - 48"	Pipe Body	Over	Under
STD, XS and XXS  Other sizes and dimensions may be furnished	1.900" OD and smaller	0.016"	0.031"
	2-3/8" through 4" OD	1%	1%
	4-1/2" through 18" OD	3/4%	3/4%
	20" OD and larger	1%	1%
	Pipe Ends (4" distance)*	Over	Under
	10-3/4" OD and smaller	1/16"	1/64"
	12-2/4" OD and larger	3/32"	1/32"

\* Required on plain end only.  
 OUT-OF-ROUNDNESS — 22" OD and larger. Pipe ends (4" distance) max. OD 1 percent larger, min. OD 1 percent smaller than tabulated.

**Permissible Variations in Wall Thickness**

Wall thickness at any point shall be within tolerances specified as follows:

	Grade B		X42 or higher	
	Plus	Minus	Plus	Minus
<b>Seamless and Welded Pipe</b>				
2-7/8" OD and smaller	20%	12-1/2%	15%	12-1/2%
3-1/2" OD thru 18" OD	15%	12-1/2%	15%	12-1/2%
Welded pipe 20" OD and larger	17-12/2%	12-1/2%	19-12/2%	8%
Seamless pipe 20" OD and larger	15%	12-1/2%	17-1/2%	10%

Weld areas of welded pipe not limited by plus tolerance.

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### Chemical Requirements

AP15L 1/8" - 48"	Ladle Analyses, percent	C		Mn		P		S
		max.	min.	max.	min.	max.	max.	
STD, XS and XXS	Grade A,							
	Seamless	0.25	—	0.90	—	0.04	0.05	
	Welded	0.21	—	0.90	—	0.04	0.05	
	Grade B,							
	Seamless	0.27	—	1.15	—	0.04	0.05	
	Welded	0.26	—	1.15	—	0.04	0.05	
	Grade x 42							
	Seamless	0.29	—	1.25	—	0.04	0.05	
Welded	0.29	—	1.25	—	0.04	0.05		

### Tensile Requirements

	Tensile Strength min, psi	Yield Point min, psi
Grade A	48,000	30,000
Grade B	60,000	35,000
Grade X 42	60,000	42,000

Table lists minimum elongation values calculated by the equation:  
 $e = 625,000 A_{0.2} / U_{0.9}$

### Mechanical Tests Specified

#### **TENSILE TEST**

Required on longitudinal specimens in all sizes except welded pipe 8-5/8 inch OD and larger where transverse specimens must be used. Transverse tests must also be made for determination of the tensile strength of the weld.

#### **BEND TEST**

Required of grade A25 welded pipe in sizes 2-3/8 inch OD and smaller. Pipe shall stand cold bending through 90 degrees around a mandrel with a diameter twelve times that of OD of pipe. Weld shall be located approximately 45 degrees from point of contact of specimen and mandrel.

#### **FLATTENING TEST**

Required of all electric welded pipe. Grades A and B in sizes 2-3/8 inch OD and larger, and welded grade A25 in sizes 2-7/8 inch and larger.