STANDARD PIPE & LINE PIPE

ISO 9001

U. S. Steel Tubular Products

Line pipe ready for transport at our Fairfield Tubular Operations facility in Fairfield, Alabama

CONTENTS

Rev. 5 08/19

GENERAL INFORMATION

Tubular Products is one of U. S. Steel's oldest business lines. When the corporation was formed in 1901 it absorbed the National Tube Company, a conglomerate created just two years earlier by the merger of 13 small companies. The acquisition immediately made U. S. Steel a major player in tubular steel products.

Today, U. S. Steel manufactures more than 1,500 different types of steel, many of them formulated in close consultation with our customers. Our annual tubular product capacity is 1.9 million net tons. Standard and line pipe from U. S. Steel Tubular Products are widely used in the oil and gas, pipeline, construction, refining, chemical and petrochemical industries.

U. S. Steel manufacture premium steel products including slabs, coils, and, tubular products. Our meticulous methods give us control over the composition and quality of our products – from the raw materials we choose, to the complex metallurgical and mechanical processes we use to form and finish our steel. Our facilities can produce a wide range of high-quality, high-strength, low-residual, formable steels with unique properties that are virtually impossible to produce using any other method.

The steels of today are far more sophisticated than metals of earlier eras. The addition of alloys, plus an array of field-testing, lab-testing, melting, casting and hot-rolling practices, along with specialized heat treatments, have created steels that are precisely crafted to meet and/or exceed demanding product requirements. U. S. Steel's innovative software applications calculate, measure, test, record and analyze every aspect of the modern steelmaking process.

At U. S. Steel, we use cutting-edge technology to manage every aspect of production. Real-time communication between control room and machine operators allows for precise regulation of each step of the process, from charging furnaces with raw ingredients to controlling temperatures, timing, alloying, flows, testing and transport.

U. S. Steel's commitment to the tubular business is even stronger today than it was when we went into the business more than a century ago. Upgrades to our facilities and investments in new technology give us the latest tools to provide our customers with consistent high-quality products.

Sizes and Grades

U. S. Steel Tubular Products provides seamless and electric resistance welded pipe in OD sizes ranging from 1.9 inches to 24 inches. A variety of end finishes, lengths, grades and wall thicknesses are available.

To ensure the absolute highest quality, U. S. Steel Tubular Products has implemented a Quality Management System in full compliance with API Q1 and ISO 9001. U. S. Steel Tubular Products maintains API licenses to manufacture and monogram products to API 5L specifications.

A full line of API grades and proprietary grades are produced to meet specialized customer needs, including hyodrogen induced cracking (HIC) -resistant pipe for use in H_2S environments and pipe grades with superior impact properties even under extremely cold arctic conditions.

Large line pipe transported by magnetic crane at our Lorain Tubular Operations

Grades of steel vary in chemical composition from simple carbon manganese to complex multi-element micro-alloyed composition. Precise control of compositions and manufacturing processes allows for the manufacture of tubular products with a wide variety of properties and attributes.

When selecting the proper Material Specification, Pipe Grade, ASTM Special Requirement, API 5L Product Specification Level (PSL), API 5L Annex Requirement or CSA Z245.1 Category or Service Group, the end use and method of pipe fabrication should be considered. Various practices are employed in all phases of steel production, which determine the type and quality of the finished product.

Certifications

U. S. Steel Tubular Products facilities meet the certification standards of the leading organizations that interface with our industry and our customers. U. S. Steel facilities are API Q1 certified and/or ISO 9001 certified.

Specific certifications include:

- ISO 9001 (Quality Management Verification)
- ISO 14001 (Environmental Management)
- ISO 17025 (Standards for Testing and Calibration Laboratories)
- API 5L (Manufacturer of Standard and Line Pipe)
- PED (Compliance with Pressure Control Directive)

A complete list of all of our current certifications can be found at: www.usstubular.com/resources/certifications

Sizes and Grades Chart

Type of Pipe Regular Mill Production	Size Range, NPS	Size Range, Inches	Wall Thickness Range, Inches	Max. Length, Feet
Seamless	1.5 - 24	1.900 - 24.000 OD	0.140 - 2.312	48
Electric Resistance Weld	2 - 16	2.375 - 16.000 OD	0.154 - 0.625	48

Hot shell moving through a second piercing to increase diameter and length

Common Standard & Line Pipe Calculations

Pressure Determinations

Barlow's Formula is commonly used to determine the following:

- Internal Pressure at Minimum Yield
- Ultimate Burst Pressure
- Maximum Allowable Operating Pressure, and
- Mill Hydrostatic Test Pressure

This formula is expressed as $P = \frac{2St}{D}$, where:

P = pressure, psig
t = nominal wall thickness, inches
D = outside diameter, inches
S = allowable stress, psi

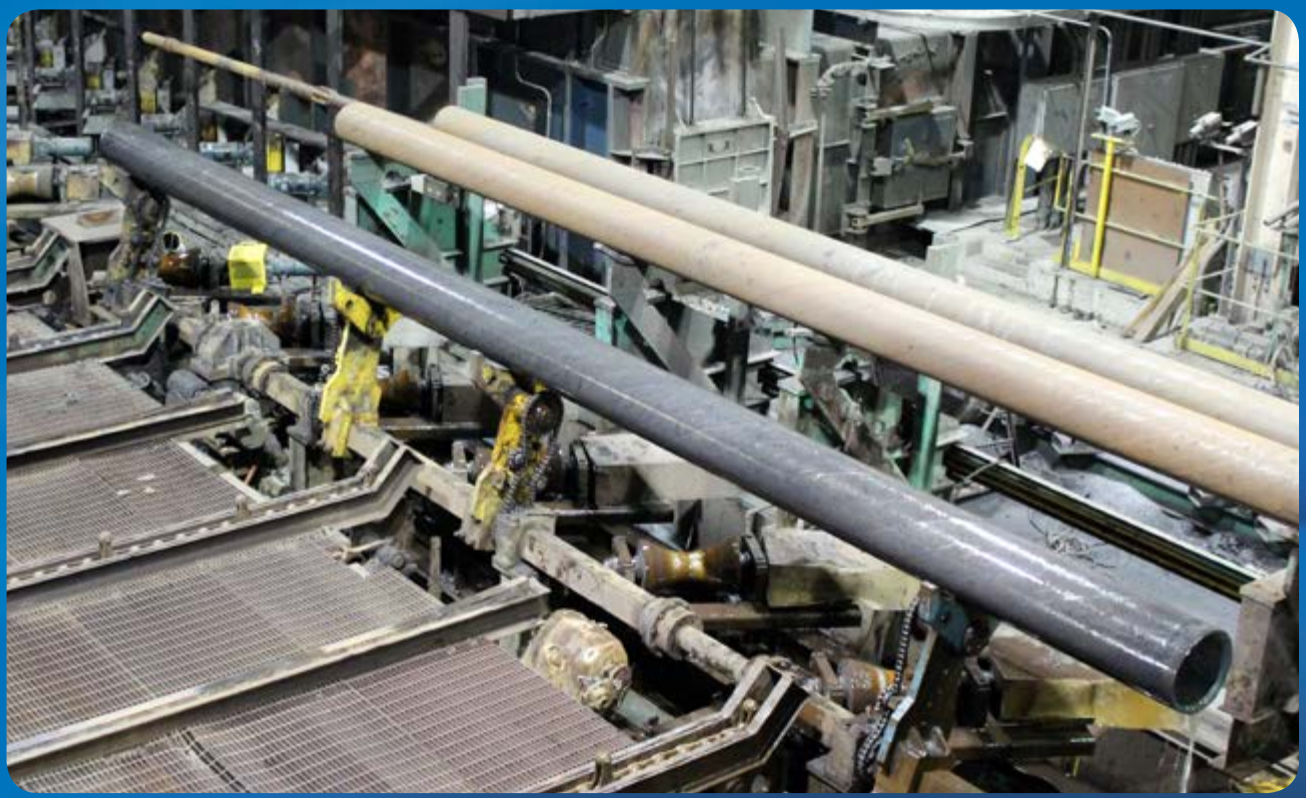
To illustrate, assume a seamless piping system 8-5/8" OD x 0.375" wall specified to API 5L Grade B which has a specified minimum yield strength (SMYS) of 35,500 psi and a specified minimum tensile strength (SMTS) of 60,200 psi.

Internal Pressure at Minimum Yield

S=SMYS (35,500 psi)

and

$$P = \frac{2St}{D} = \frac{2\ (35{,}500)\ (0.375)}{8.625} = 3{,}087 \text{ or } 3{,}090 \text{ psig (rounded to nearest 10 psig)}$$



Pipe exiting the quenching unit at the No. 3 mill in Lorain Tubular Operations

Ultimate Burst Pressure at Minimum Tensile

S = SMTS (60,200 psi)

and

$$P = \frac{2St}{D} = \frac{2\ (60{,}200)\ (0.375)}{8.625} = 5{,}234.7 \text{ psig or } 5{,}230 \text{ psig (rounded to nearest 10 psig)}$$

Maximum Allowable Operating Pressure (MAOP)

S=SMYS (35,500 psi) reduced by a design factor, for example 0.72,

and

$$P = \frac{2St}{D} = \frac{2\ (35{,}500 \times 0.72)\ (0.375)}{8.625} = 2{,}222.6 \text{ psig or } 2{,}220 \text{ psig (rounded to nearest 10 psig)}$$

Mill Hydrostatic Test Pressure

S=SMYS (35,500 psi) reduced by a factor depending on OD and grade (0.60 for 8-5/8" OD Grade B)

and

$$P = \frac{2St}{D} = \frac{2\ (35{,}500 \times 0.60)\ (0.375)}{8.625} = 1{,}852.2 \text{ psig or } 1{,}850 \text{ psig (rounded to nearest 10 psig)}$$

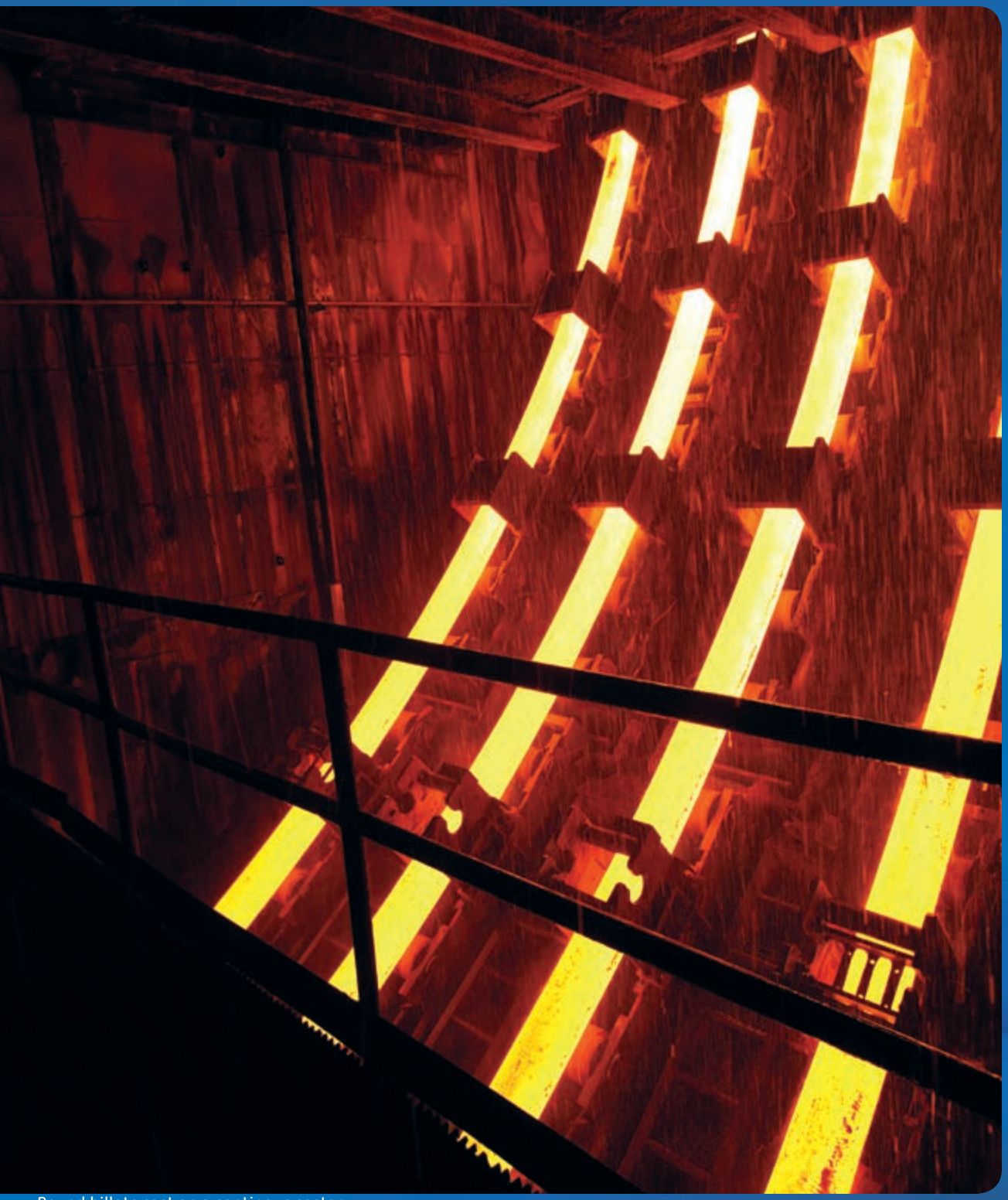
Wall Thickness

Barlow's Formula is also useful in determining the wall thickness required for a piping system. To illustrate, assume a piping system has been designed with the following criteria:

1. A working pressure of 2,000 psig (P)
2. The pipe to be used is 8-5/8" OD (D) specified to API 5L Grade B (SMYS = 35,500 psi)

Rearranging Barlow's Formula to solve for wall thickness gives:

$$t = \frac{PD}{2S} = \frac{(2{,}000)\ (8.625)}{2\ (35{,}500)} = 0.243 \text{ wall}$$



Round billets cast on a continous caster

MANUFACTURING CAPABILITIES

Fairfield Tubular Operations

Location	Fairfield, Alabama
Method of Manufacture	Seamless
OD Range	4-1/2" to 8-5/8"
Walls	0.205"-1.200"
Grades	ASTM A106B/A53 B, API5L Grade B, X42, X52, X60, X65, X70, X80 ASTM A333, CSA Z245.1 Grades 241 thru 483
Lengths	SRL, DRL

Lone Star Tubular Operations

Location	Lone Star, Texas
Method of Manufacture	Electric Resistance Weld
OD Range	Mill No. 2 - 2-3/8" to 6-5/8", Mill No. 1 - 8-5/8" to 16"
Walls	Mill No. 2 - 0.154"-0.531", Mill No. 1 - 0.250"-0.625"
Grades	ASTM A53B, API5L Grade B, X42,X52; Q&T Grades: X60, X65, X70
Lengths	SRL, DRL

Lorain Tubular Operations

Location	Lorain, Ohio
Method of Manufacture	Seamless
OD Range	Mill No. 4 - 1.9" to 5-9/16", Mill No. 3 - 10-3/4" to 24", Quench & Tempering Facility No. 6 Q&T - 2-3/8" to 6-5/8"
Walls	Mill No. 4 - 0.140"-0.674", Mill No. 3 - 0.365"-2.312", No. 6 Q&T - 0.205"-0.812"
Grades	ASTM A106B/A53 B, ASTM A106C, API5L Grade B, X42, X52, X60, X65, X70, X80, ASTM A333, CSA Z245.1 Grades 241 thru 483
Lengths	SRL, LRL, DRL

Fairfield Tubular Operations – 4-1/2" to 8-5/8" OD Seamless Manufacturing Process

Manufacturing:	Seamless
OD Range:	4-1/2" to 8-5/8"
Walls:	0.205" to 1.200"
Lengths:	SRL, DRL
Grades:	ASTM A 106B/A53 B, API5L GRADE B, X42, X52, X60, X65, X70, X80
	ASTM A333, CSA Z245.1 Grades 241 thru 483

Fairfield Tubular Operations can produce approximately 750,000 net tons of seamless tubular products every year. The process begins with solid steel rounds, or billets, being cut to a specified length and sent through a walking-beam reheat furnace, where temperatures reach nearly 2,300°F.

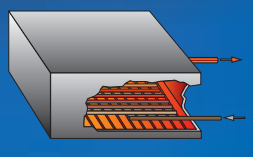
After exiting the reheat furnace, the preheated rounds are turned into a tube shell in the rotary piercing mill as the billets are cross-rolled between two barrel-shaped rolls at a high speed.

The seamless shells enter Fairfield's seven-stand mandrel mill, where they are rolled over a retained mandrel to provide the needed OD size and wall thickness for the next process. The process is carefully monitored using a state-of-the-art hot-wall measuring system.

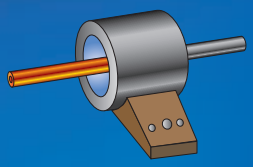
The shells are then reheated for final forming in a 24-stand stretch-reducing mill, where outside diameters are formed to customers' exacting specifications. Wall thickness is again verified using a hot-wall measuring system.

After being rotated and advanced on the walking-beam cooling bed, the pipes are batch cut and transferred to an in-process storage area, where they are handled by computer-controlled gantry cranes.

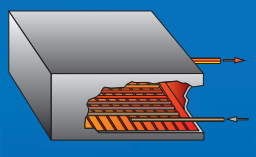
Heat Treating



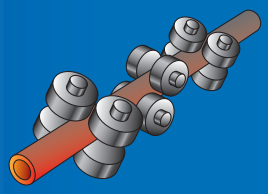
Austenitizing Furnace



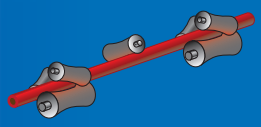
Quenching Unit



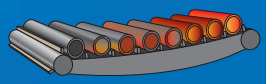
Tempering Furnace



Sizing Mill

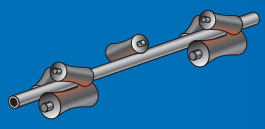


Hot Straightener

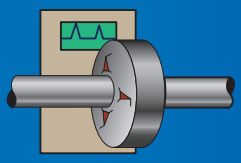


Cooling Bed

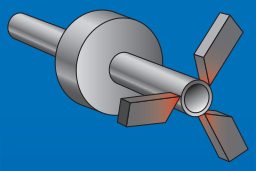
Finishing



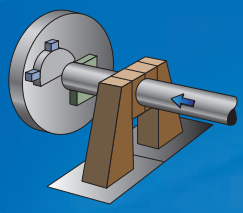
Straightening



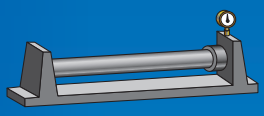
NDT Inspection



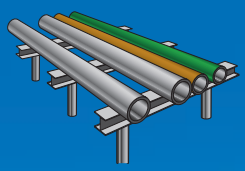
Cut-Off Facilities



Facing and Beveling



Hydrostatic Testing



Final Inspection

From this in-process storage, pipe can be delivered to one of three primary workstations: heat treating, finishing or special pipe processing.

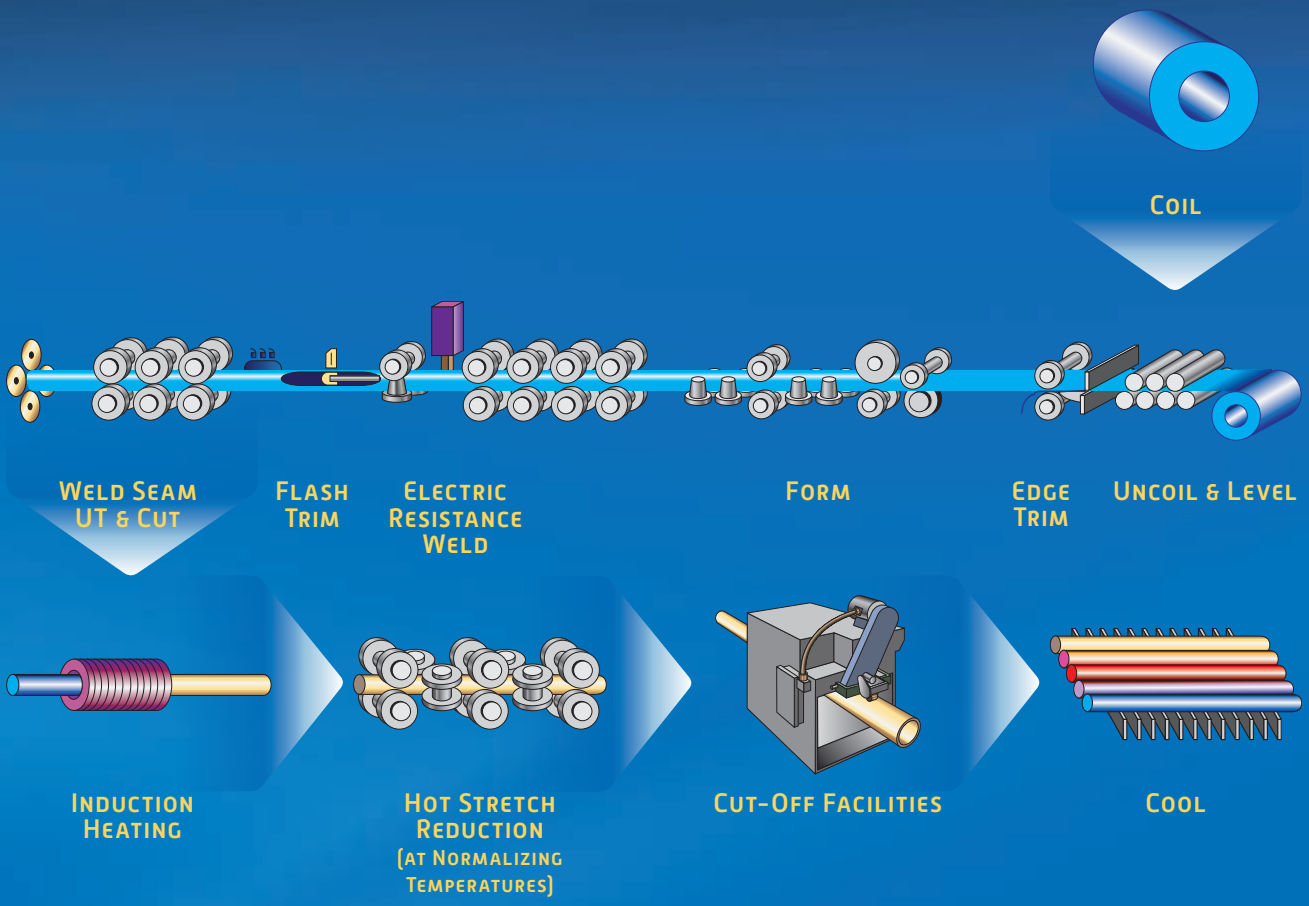
Depending on grade, pipe might undergo quenching and tempering to alter its micro-structure to improve strength or other properties. Quenching and tempering controls hardness, reduces brittleness, and brings the steel to tensile and yield strengths required for the specified grade.

Seamless pipe that has not been quenched and tempered passes initially through a straightener and then a non-destructive testing (NDT) unit. (Q&T pipe goes directly to the NDT area.)

Electromagnetic inspection (EMI) detects longitudinal and transverse flaws as the pipe moves though a set of coils. Ultrasonic testing is used to verify wall thickness. Grade/composition is verified on each pipe by eddy current. All pipe is hydro-tested.

Finished pipe is weighed, measured, stenciled with a unique identification, coated and loaded onto rail cars for shipment to customers.

Lone Star Tubular Operations
Mill No. 2 – 2-3/8" to 6-5/8" OD
Electric Resistance Weld Manufacturing Process



Manufacturing:	Electric Resistance Weld
OD Range:	2-3/8" to 6-5/8"
Walls:	0.154" to 0.531"
Lengths:	SRL, DRL
Grades:	ASTM A53 B, API5L GRADE B, X42, X52; Q&T Grades: X60, X65, X70

U. S. Steel's Lone Star Tubular Operations Mill No. 2 manufactures high-quality ERW tubular products primarily for the oil and gas industries.

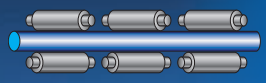
Steel arrives in coils slit to precise width. The strip steel is uncoiled, leveled, conveyed through a side trimmer, which shears both edges to provide proper width and clean surfaces for welding.

The strip then passes through a series of forming rolls, which transform the coil from a flat strip of steel to round pipe sections. The edges of the strip are contoured for seam welding. The weld is created by heat obtained from the pipe's resistance to the flow of electric current of the circuit of which it is part, and by applied pressure to form a forged weld. No filler metal is used in the welding process.

After the flash (metal extruded by the weld process) is removed from the pipe's inside and outside surfaces, the pipe is cut to length by a flying rotary cutoff. Weld integrity is checked by in-line ultrasonic test equipment.

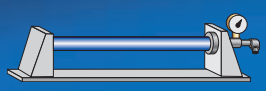
The pipe then passes through a series of induction heating furnaces where the entire pipe is heated to temperatures above 1,650°F, processed through a stretch reduction mill, then allowed to air cool. This full-body normalizing operation produces uniform grain structure throughout the entire pipe wall. The normalizing furnaces also heat the pipes for diameter reduction and a more uniform finished product. Grades X60 through X80 require heat treatment and quenching. (This additional process is not shown in the flow diagram.)

FINISHING 2-3/8" - 4"

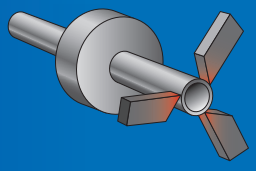


STRAIGHTEN

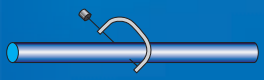
BEVEL



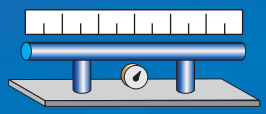
HYDROSTATIC TEST



CUT-OFF & RE-BEVEL (AS NEEDED)

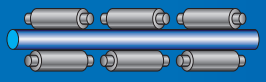


FINAL INSPECTION

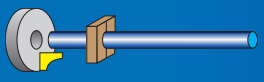


WEIGH, MEASURE, STENCIL & SHIP

FINISHING 4" - 6-5/8"

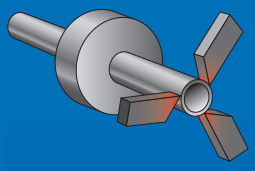


STRAIGHTEN

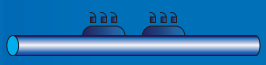


BEVEL

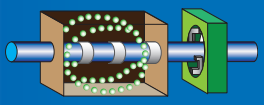
HYDROSTATIC TEST



CUT-OFF & RE-BEVEL (AS NEEDED)



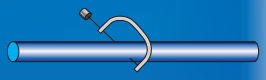
FULL BODY UT



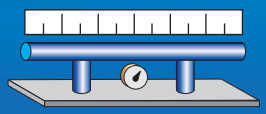
PIPEIMAGE® (EMI)

UPON AGREEMENT ONLY

WELD SEAM UT



FINAL INSPECTION

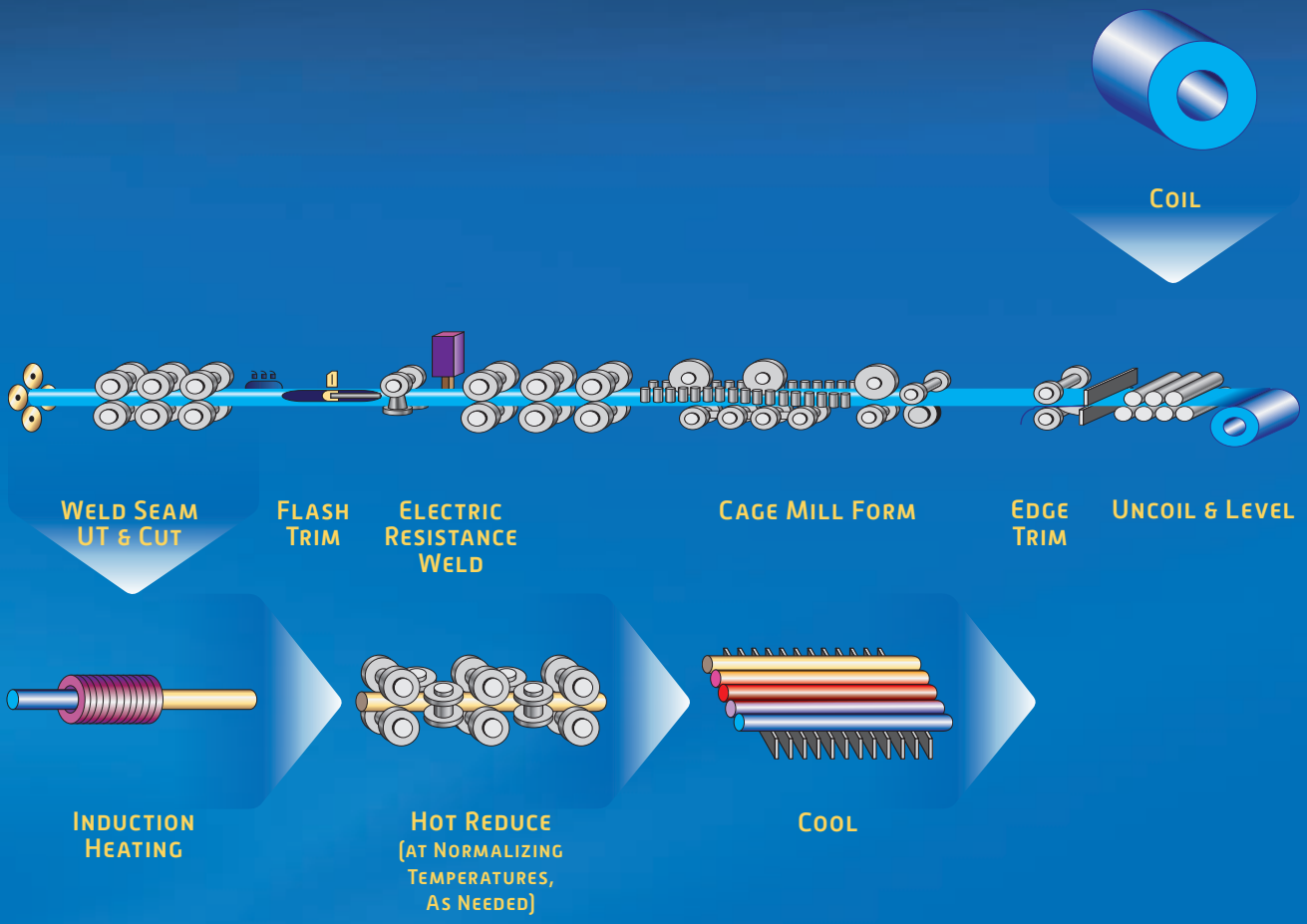


WEIGH, MEASURE, STENCIL & SHIP

After cooling, pipe is straightened, visually inspected, stenciled with the appropriate identity and queued for finishing. In the finishing department, the pipe is beveled, inspected and hydrostatically tested. Full-body electromagnetic and ultrasonic testing is available for pipe sizes 4" and larger.

Laboratory tests confirm full compliance to specifications and other mechanical property requirements.

Lone Star Tubular Operations
Mill No. 1 – 8-5/8" to 16" OD
Electric Resistance Weld Manufacturing Process



Manufacturing:	Electric Resistance Weld
OD Range:	8-5/8" to 16"
Walls:	0.250" to 0.562"
Lengths:	SRL, DRL
Grades:	ASTM A53 B, API5L GRADE B, X42, X52; Q&T Grades: X60, X65, X70, X80

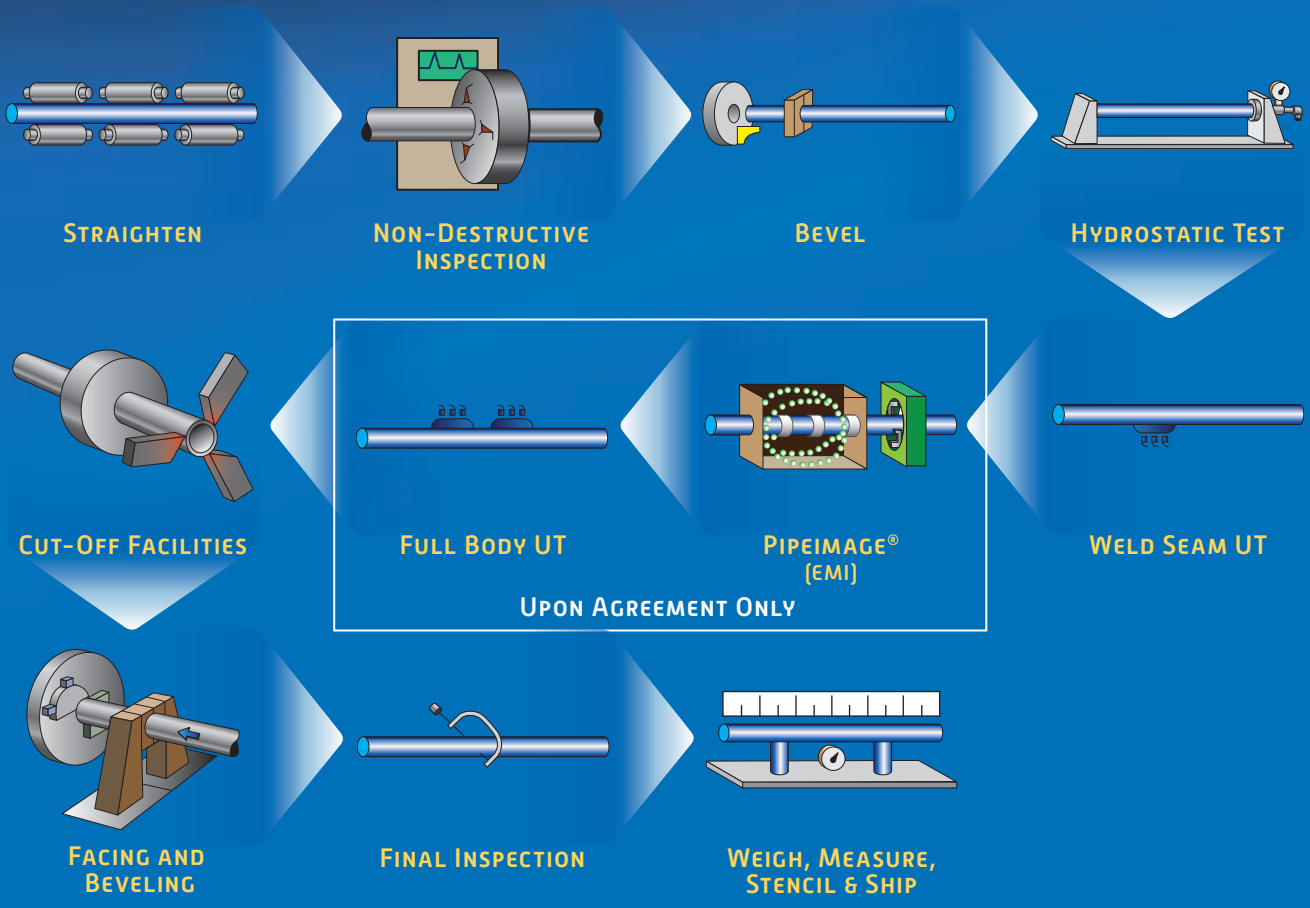
U. S. Steel's Lone Star Tubular Operations Mill No. 1 manufactures high-quality ERW tubular products primarily for the oil and gas industries.

Steel arrives at the facility in coils slit to precise width before the manufacturing process begins. The strip steel is uncoiled, leveled, conveyed through a side trimmer, which shears both edges to provide proper width and clean surfaces for welding.

The strip then passes through a series of forming rolls, which transform the coil from a flat strip of steel to round pipe sections. The edges of the strip are contoured for seam welding. The weld is created by heat obtained from the pipe's resistance to the flow of electric current of the circuit of which it is part, and by applied pressure to form a forged weld. No filler metal is used in the welding process.

After the flash (metal extruded by the weld process) is removed from the pipe's inside and outside surfaces, the pipe is cut to length by a flying rotary cutoff. Weld integrity is checked by ultrasonic test equipment in line behind each welder.

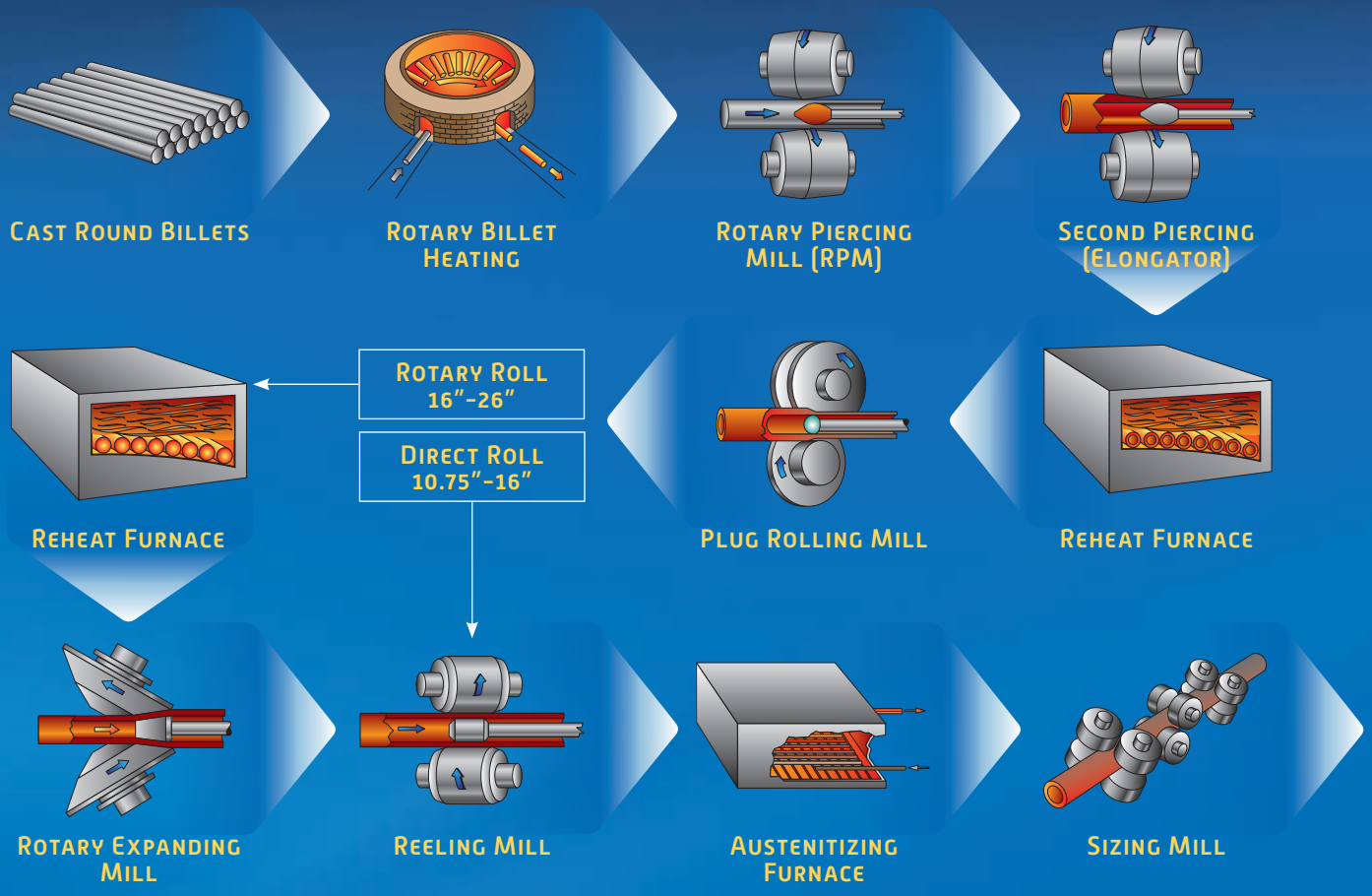
The pipe passes through a series of induction heating furnaces where the entire pipe is heated to temperatures above 1,650°F, processed through a stretch reduction mill as needed, then allowed to air cool.



This full-body normalizing operation produces uniform grain structure throughout the entire pipe wall. The normalizing furnaces may also heat the pipes for diameter reduction and a more uniform finished product.

After cooling, pipe is sized, straightened, visually inspected, stenciled with the appropriate identity and queued for finishing. Laboratory tests confirm full compliance to specifications and other mechanical property requirements before the pipe is beveled, electromagnetically inspected and hydrostatically tested.

Lorain Tubular Operations – Mill No. 3 – 10-3/4" to 24" OD Seamless Manufacturing Process



Manufacturing:	Seamless
OD Range:	10-3/4" to 24"
Walls:	0.365" to 2.312"
Lengths:	SRL, LRL, DRL
Grades:	ASTM A 106B/A53 B, API5L GRADE B, X42, X52, X60, X65, X70, X80, ASTM A333, CSA Z245.1 Grades 241 thru 483

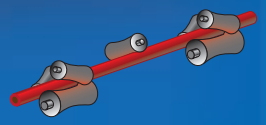
Lorain Mill No. 3 manufactures superior seamless pipe, beginning with the processing of continuous cast round billets using the latest steelmaking technology. The cast round billets begin their journey in the rotary hearth furnace where temperatures exceed 2,300°F.

The preheated round billets are processed through a piercing mill to form a pierced billet or shell. The hot shell is then run through a second piercing mill and a plug rolling mill to increase diameter and length, and to reduce and improve the uniformity of the wall thickness. As the billet goes through the first piercer, it is gripped by rolls, which rotate and advance it over the piercer point, forming a hole through its length.

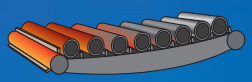
The second piercing mill further increases the diameter and length of the shell and reduces the wall thickness.

The pierced hot shell passes through the plug rolling mill to again reduce the wall thickness and to increase the length. Pipe larger than 16" OD is reheated and sent through a rotary rolling mill, which uses large discs to expand the hot pipes up to 24" in diameter. Rotary rolling can produce pipe as long as 48 feet.

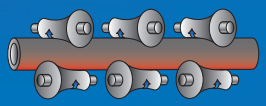
The pipe then passes through the reeling and sizing mills. The reeling mill grips the pipe and advances it over a mandrel, burnishing the inside and outside surfaces. After moving through an intermediate cooling station, the pipe proceeds on one of two paths.



Hot Straightener

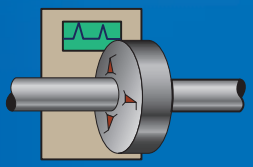


Cooling Bed

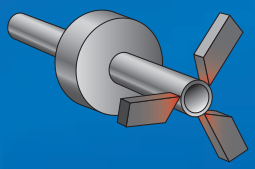


Rotary Straightener

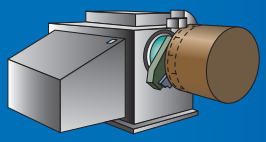
Finishing



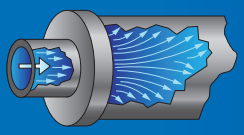
EMI



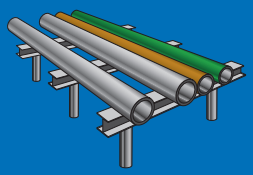
Cut-Off Facilities



Facing & Beveling



Hydrostatic Testing



Final Inspection

Full Body UT
(Optional)

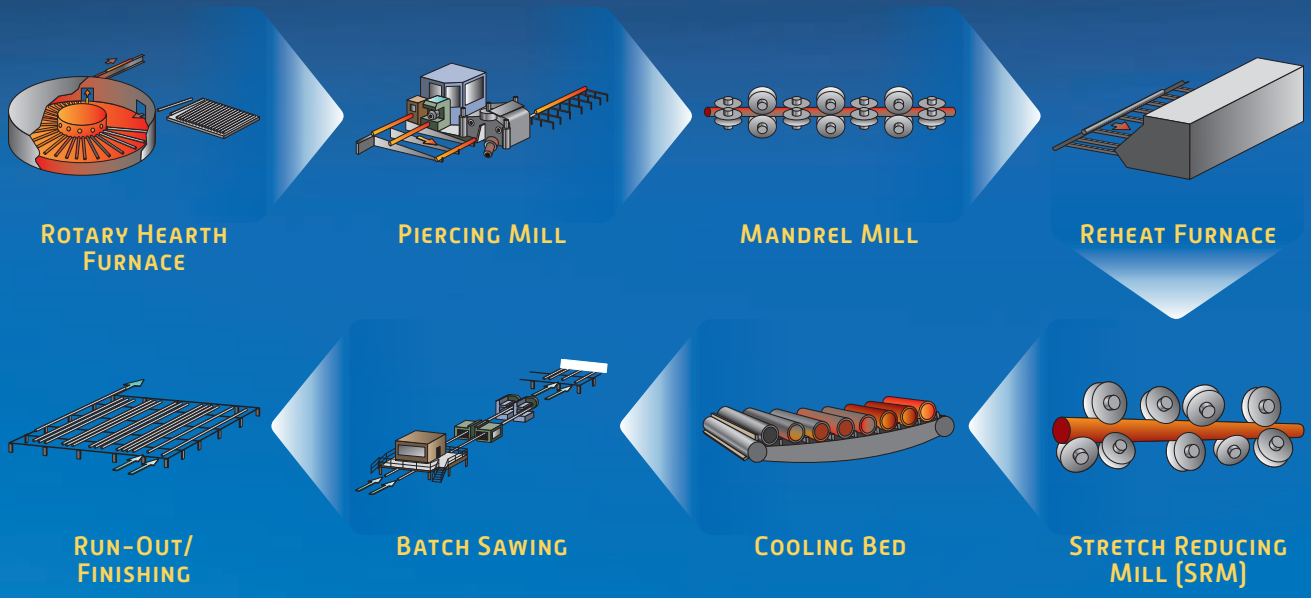
If the steel is an as-rolled carbon grade product, it is heat-equalized in a walking-beam reheat furnace and then sent through a three-stand sizing mill to reach final outside dimension. If the steel requires heat treating, the reheat furnace's temperature is raised to austenitize the pipe. The steel exits the furnace and passes through a state-of-the-art OD/OD-ID quench and walking-beam temper furnace (not pictured) before rejoining the main production line to pass through the three-stand sizing mill. After sizing, the pipe is allowed to cool on slowly moving conveyor tables in preparation for straightening. For products that require hot straightening, these cooling tables are bypassed and the pipe is sent directly from the sizer to the straightener.

The pipe is then ready for finishing. The pipe undergoes NDT inspection to detect any body wall imperfections. Any imperfections are proved up and dispositioned in accordance with specified tolerances.

After inspection, an expanding arbor holds the pipe in line while a revolving head faces and bevels the end of the pipe. The finished pipe is visually inspected and subjected to a hydrostatic test as a strength and leak check before shipping.

When required by specification or customer order requirements, the pipe is processed through one of several offline UT and special end area inspection units.

Lorain Tubular Operations
Mill No. 4 – 1.900" to 5-9/16" OD
Seamless Manufacturing Process



Manufacturing:	Seamless
OD Range:	1.900" to 5-9/16"
Walls:	0.140" to 0.674"
Lengths:	SRL, DRL
Grades:	ASTM A 106B/A53 B, API5L GRADE B, X42, X52, X60, X65, X70, X80, ASTM A333, CSA Z245.1 Grades 241 thru 483

The process at Lorain Mill No. 4 begins with continuous cast round billets being heated in a rotary hearth furnace to proper temperature for piercing. The heated billets are center punched and pierced by advancing the billet over a piercer point in the piercing mill.

The pierced billet or shell is transferred to a mandrel mill and rolled over a solid mandrel where the OD is reduced and the length is increased. The shell is then reheated to proper rolling temperature in preparation for the final rolling process.

The hot shell is run through a descaling unit to prepare the OD surface for rolling and run through the stretch reducing mill. At this stage, the final OD and wall thickness are established for the pipe.

After exiting the stretch reducing mill, the pipe is allowed to cool on a walking-beam cooling bed. Sample inspections are also conducted at this point.

After cooling, the pipe is batched, stenciled and sawed to the specified length. The sawed pipe is then transferred to a run-out table and moved to finishing.

Pipe ends are faced on dual automatic facers and sample inspections are performed. Heat treating, additional inspections, and hydrotesting can be performed at No. 6 Quench & Temper and Finishing facility or another U. S. Steel facility.

Lorain Tubular Operations
Mill No. 6 – 2-3/8" to 7-5/8" OD
Quench and Temper and Finishing Process

Facility Purpose: Quench & Tempering
OD Range: 2-3/8" to 6-5/8"
Walls: 0.205" to 0.812"
Lengths: 20' to 48'
Grades: ASTM A 106B/C, A53 B, A333 Grades 1 and 6, API5L B, X42, X52, X60, X65, X70, X80, ASTM A333, CSA Z245.1 Grades 241 thru 483

The No. 6 Quench and Temper and Finishing Facility was built in 2011. The facility processes pipe from 2.375 to 6.625 inches in outside diameter, with a wall thickness of up to 0.812 inches, and to a maximum finished pipe length of 48 feet. Green tubes to be heat treated arrive in railroad cars and are loaded on to a charge table with the use of a magnet crane. Pipe is conveyed into the austenitizing furnace, heated to the required temperature and then cooled with an OD water quench to below 200°F. After entering the tempering furnace, precise control of the temperature is used to control the mechanical properties along the length of the pipe. Pipe travels through a 100-ton, 6-roll opposing straightener and then on to a walking-beam cooling bed.

The finishing portion of the facility starts with a combination EMI/UT unit and an SEA inspection unit where longitudinal and transverse flaws can be detected and wall thickness can be verified. Each pipe is then hydrostatically tested to ensure rated strength under pressure. ERW pipe undergoes an additional test when the weld seam is inspected with an in-line UT inspection unit. After testing is complete, the pipe is sent through the finishing process. Before shipment to the customer, pipe is grade-verified, length measured, weighed, stenciled and coated.

Small OD line pipe on cooling bed after going through the tempering furnace

PRODUCT PROPERTIES

U. S. Steel Tubular Products manufactures both seamless and welded pipe to meet specific customer requirements. Advanced manufacturing techniques and controls ensure high quality, uniform, economical products. A complete range of ODs, end finishes and lengths are available.

Seamless Standard Pipe and Line Pipe

U. S. Steel Tubular Products manufactures its seamless pipe by piercing solid billets of fully killed steel. This "seamless" method of manufacture is a type of forging/forming operation that only the soundest, toughest steel can tolerate.

Chemical and mechanical property requirements are as prescribed by current API, ASTM, ASME and applicable CSA standards. U. S. Steel Tubular Products is the only domestic producer of seamless pipe in the 11-3/4" to 24" OD size range.

U. S. Steel Tubular Products provides seamless Standard Pipe and Line Pipe for a wide range of applications. Our seamless pipe has an unsurpassed record of safety, and uniform strength and ductility, making it the product of choice for critical applications.

Standard Pipe is widely used primarily in the construction, refining, chemical and petrochemical industries. Line Pipe is used for the transmission of crude oil, natural gas and petroleum products as well as for water and slurry pipeline applications.

Availability – Standard Diameters and Walls

Size[1]		Wall Thickness,[2] Inches	
NPS	OD (Inches)	Lorain, OH	Fairfield, AL
1-1/2	1.900	0.140-0.281	-
2	2-3/8	0.154-0.436	-
2-1/2	2-7/8	0.160-0.552	-
3	3-1/2	0.170-0.600	-
3-1/2	4	0.180-0.650	-
4	4-1/2	0.188-0.674	0.205-0.750
5	5-9/16	0.188-0.674	0.250-0.750
6	6-5/8	-	0.250-0.870
8	8-5/8	-	0.250-1.200
10	10-3/4	0.307-2.000	-
12	12-3/4	0.330-2.312	-
14	14	0.375-2.000	-
16	16	0.375-2.000	-
18	18	0.375-1.562	-
20	20	0.375-1.512	-
22	22	0.375-1.375	-
24	24	0.375-1.250	-

1 Sizes between NPS 1 1/2 and 24 not listed subject to inquiry.

2 Maximum wall varies for grades over X42 and is subject to mill inquiry.

Electric Resistance Weld (ERW) Standard Pipe and Line Pipe

U. S. Steel Tubular Products' ERW Standard Pipe and Line Pipe are smoothly finished, thin-walled, extra-long products produced by continuously forming coiled bands and welding the longitudinal seam using high-frequency electric resistance welding. Chemical and mechanical property requirements are as prescribed by current API 5L and applicable ASTM standards.

ERW Standard Pipe and Line Pipe are widely used throughout the oil and gas industry, as well as for pipe piling, pipe-type cable systems and hydraulic hoists.

Characteristics and Advantages

Smooth Surfaces – U. S. Steel Tubular Products hot rolled strip steel is continuously cold formed into smooth-surfaced, uniform-gage pipe for superior flow characteristics.

Stronger, Lighter Walls – The improved, higher strength, lighter gage steel bands used by U. S. Steel Tubular Products are fused by high-frequency electric resistance welders into rugged pipe that can meet exacting tolerances and strength specifications.

Uniform Dimensions and Quality – Higher automated production, combined with continuous non-destructive and visual inspection and hydrostatic testing, assures a pipe product of excellent quality. And, because the pipe is made from flat-rolled steel, it has highly uniform wall thicknesses.

Lone Star, TX Availability (Subject to inquiry)		
Size[1]		Wall Thickness,[2] Inches
NPS	OD	
2	2-3/8	0.218-0.344
2-1/2	2-7/8	0.203-0.375
3	3-1/2	0.216-0.330
3-1/2	4	0.226-0.318
4	4-1/2	0.237-0.531
5	5-9/16	0.258-0.500
6	6-5/8	0.280-0.432
8	8-5/8	0.250-0.750
10	10-3/4	0.279-0.500
12	12-3/4	0.250-0.500
14	14	0.312-0.562
16	16	0.375-0.562

1 Sizes not listed subject to inquiry.

2 Maximum wall varies for grades over X42 and is subject to mill inquiry.

COMPARATIVE SPECIFICATIONS

The following information is summarized from ASTM standards and API Specification 5L in effect at the time of publication. Please refer to the specific standards or specifications for more details.

A53 Seamless and Welded Standard Pipe

Specification A53 covers seamless and welded, black and hot-dipped galvanized nominal (average) wall pipe for coiling, bending, flanging and other special purposes and is suitable for welding.

Mechanical Properties – Tensile Requirements

Seamless and ERW	Grade A	Grade B
Tensile Strength, min., psi	48,000	60,000
Yield Strength, min., psi	30,000	35,000

Chemical Requirements

Seamless and ERW	C max %	Mn max %	P max %	S max %
Grade A	0.25	0.95	0.05	0.045
Grade B	0.30	1.20	0.05	0.045

Testing Requirements

Hydrostatic Testing

Hydrostatic inspection test pressures for plain end and threaded and coupled pipe are specified. Hydrostatic pressure shall be maintained for not less than 5 seconds for all sizes of Seamless and ERW pipe.

Mechanical Tests

Tensile Test – Two transverse tests required on ERW for NPS 8 and larger, one across the weld and one opposite the weld. One longitudinal test is required for seamless from the pipe body.

Flattening Test – On ERW for NPS 2 and larger, STD and XS walls (not required for XXS pipe)

Bending Test (Cold) – for NPS 2 and under, XS wall and under; for NPS 1-1/4 and under, XXS wall

	Degree of Bend	Diameter of Mandrel
For Normal A53 Uses	90	12 x nom. dia of pipe
For Close Coiling	180	8 x nom. dia of pipe

Number of Tests

Seamless and Electric Resistance Weld – bending, flattening, tensile on one length of pipe from each lot of 500 lengths, or less, of each pipe size.

A53 Seamless and Welded Standard Pipe

Permissible Variations

Wall Thickness

The minimum wall thickness at any point shall not be more than 12.5% under the nominal wall thickness specified.

Weight per Foot

Plus or minus 10%

Outside Diameter

Outside diameter at any point shall not vary from standard specified more than:

NPS	Over	Under
1 1/2 and smaller	+1/64"	-1/64"
2 and larger	+1%	-1%

Lengths

Standard Wall

Single Random – 16'-22'; (5% may be jointers); if plain ends, 5% may be 12'-16'

Double Random – Shortest length 22'; minimum average for order 35'

Extra Strong (XS) and Double Extra Strong (XXS) Walls

Single Random – 12'-22'; (5% may be 6'-12')

Double Random (XS and lighter) – Shortest length 22'; minimum average for order 35'

Lengths longer than single random with wall thicknesses heavier than XS subject to negotiation

Marking Requirements on Each Length

Rolled, Stamped or Stenciled (manufacturer's option)

- Name or brand of manufacturer
- Specification number ASTM A53
- Size (NPS and weight class, schedule number, or specified wall thickness on specified outside diameter and specified wall thickness)
- Grade A or Grade B
- Manufacturing process that is ERW (E) or Seamless (S)
- Test pressure (seamless only)
- Non-destructive electric test (seamless only)
- Length of pipe

A106 Seamless Carbon Steel Pipe

Specification A106 covers seamless carbon steel nominal wall pipe for high-temperature service, suitable for bending, flanging and similar forming operations. NPS 1-1/2 and under may be either hot finished or cold drawn. NPS 2 and larger shall be hot finished unless otherwise specified. Surface finish standards are outlined in the specification. Purchaser may specify NDE in lieu of hydrostatic test or neither. Unless otherwise specified, pipe is furnished with plain ends.

Mechanical Properties – Tensile Requirements

Seamless	Grade A	Grade B	Grade C
Tensile Strength, min., psi	48,000	60,000	70,000
Yield Strength, min., psi	30,000	35,000	40,000

Chemical Requirements

Seamless	Grade A	Grade B	Grade C
Carbon, max. %	0.25[A]	0.30[B]	0.35[B]
Manganese %	0.27 – 0.93	0.29 – 1.06	0.29 – 1.06
Phosphorus, max. %	0.035	0.035	0.035
Sulfur, max. %	0.035	0.035	0.035
Silicon, min. %	0.10	0.10	0.10

[A] For each reduction of 0.01% below the specified carbon maximum, an increase of 0.06% above the specified maximum for manganese is permitted, up to a maximum of 1.35%.

[B] Unless otherwise specified by the purchaser, for each reduction of 0.01% below the specified carbon maximum, an increase of 0.06% manganese above the specified maximum will be permitted, up to a maximum of 1.65%.

Testing Requirements

Hydrostatic Testing

Inspection test pressures produce a stress in the pipe wall equal to 60% of specified minimum yield strength (SMYS) at room temperature. Maximum pressures are not to exceed 2,500 psi for NPS 3 and under, and 2,800 psi for the larger sizes. Pressure is maintained for not less than 5 seconds.

Mechanical Tests

Tensile Test – NPS 8 and larger – either transverse or longitudinal acceptable

Smaller than NPS 8 – longitudinal only

Flattening Test – NPS 2 and larger

Bending Test (Cold) – NPS 2 and under

	Degree of Bend	Diameter of Mandrel
For Normal A106 Uses	90	12 x nom. dia. of pipe
For Close Coiling	180	8 x nom. dia. of pipe

Number of Tests

	NPS	On One Length From Each Lot of
Tensile	5 and smaller 6 and larger	400 or less 200 or less
Bending	2 and smaller	400 or less
Flattening	2 through 5 6 and over	400 or less 200 or less

A106 Seamless Carbon Steel Pipe

Permissible Variations

Wall Thickness

The minimum wall thickness at any point shall not be more than 12.5% under the nominal wall thickness specified.

Weight per Foot

Weight of any individual length of pipe shall not vary more than 10% over and 3.5% under that specified. NOTE: NPS 4 and smaller – weighed in lots. Larger sizes – weighed by individual length.

Outside Diameter

Outside Diameter shall not vary from standard specified below at any point.

NPS	Over	Under
1 1/2 and smaller	+1/64"	-1/64"
2-4	+1/32"	-1/32"
5-8	+1/16"	-1/32"
10-18	+3/32"	-1/32"
20-24	+1/8"	-1/32"

Length Requirements

Lengths required shall be specified on order. No "jointers" permitted unless otherwise specified. If no definite lengths required, following practice applies:

Single Random – 16'-22' (5% may be 12'-16')

Double Random – Minimum length is 22'; minimum average is 35' (5% may be 16'-22')

Marking Requirements On Each Length

Rolled, Stamped or Stenciled (manufacturer's option)

- Manufacturer's name or brand
- A106 A, A106 B or A106 C
- Hydrostatic test pressure and/or NDE, or NH if neither is specified
- Length of pipe
- ANSI schedule number or weight class or wall thickness
- Weight per foot (NPS 4 and larger)
- Additional "S" if tested to supplementary requirements

A252 Piling Pipe

Specification A252 covers nominal (average) wall steel pipe piles of cylindrical shape and applies to pipe piles in which the steel cylinder acts as a permanent load-carrying member or as a shell to form case-in-place concrete piles. Surface imperfections exceeding 25% of the nominal wall in depth are considered defects. Defects not exceeding 33.5% of the nominal wall in depth may be repaired by welding. Before welding, the defect shall be completely removed.

Mechanical Properties – Tensile Requirements

	Grade 1	Grade 2	Grade 3
Tensile Strength, min., psi	50,000	60,000	66,000
Yield Strength, min., psi	30,000	35,000	45,000

Chemical Requirements

	Phosphorus
Seamless and Welded	Max % 0.050

Testing Requirements

Hydrostatic Testing

None specified

Mechanical Tests

Tensile Test – either longitudinal or transverse at option of manufacturer

Number of Tests

One tensile property test per 200 lengths

Permissible Variations

Wall Thickness

Not more than 12.5% under the nominal wall thickness specified

Weight per Foot

The weight of any individual length of pipe shall not vary more than 15% over or 5% under the weight specified. Each individual length shall be weighed separately.

Outside Diameter

Shall not vary more than plus or minus 1% from the diameter specified

Lengths

May be ordered in single or double random lengths or in uniform lengths.

Single Random – 16′ - 25′ inclusive

Double Random – Over 25′ with a minimum average of 35′

Uniform – Plus or minus 1″ on length specified

Marking Requirements On Each Length

Rolled, Die Stamped or Paint Stenciled (manufacturer's option)

Manufacturer's name, brand or trademark, heat number, method of pipe manufacture, size, weight, length, wall thickness and ASTM A252 and the Grade.

A333 Seamless and Welded Steel Pipe for Low-Temperature Service and Other Applications with Required Notch Toughness

Specifications A333 covers nominal (average) wall seamless and welded carbon and alloy steel pipe intended for use at low temperatures and in other applications requiring notch toughness. Some product sizes may not be available under this specification because heavier wall thicknesses have an adverse effect on impact properties.

Mechanical Properties – Tensile Requirements

Seamless and ERW	Grade 1	Grade 6
Tensile Strength, min., psi	55,000	60,000
Yield Strength, min., psi	30,000	36,000

Chemical Requirements

Seamless and ERW	Grade 1	Grade 6
Carbon, max. %	0.30	0.30
Manganese %	0.40 – 1.06[A]	0.29 – 1.06[A]
Phosphorus, max. %	0.025	0.025
Sulfur, max. %	0.025	0.025
Silicon, min. %	...	0.10
Nickel, max. %	...	0.40
Chromium, max. %	...	0.30
Copper, max. %	...	0.40
Aluminum %	...	...
Vanadium, max. %	...	0.08
Niobium[D], max. %	...	0.02[C]
Molybdenum, max. %	...	0.12
Cobalt %	...	...

[A] For each reduction of 0.01% carbon below 0.30%, an increase of 0.05% manganese above 1.06% would be permitted to a maximum of 1.35% manganese.

[B] Where an ellipsis (...) appears in this table, there is no requirement and analysis for the element need not to be determined or reported.

[C] By agreement between the manufacturer and the purchaser, the limit for niobium may be increased up to 0.05% on heat analysis and 0.06% on product analysis.

[D] The term Niobium (Nb) and Columbium (Cb) are alternate names for the same element.

Testing Requirements

Hydrostatic Testing
or Non-Destructive Electric Testing

Mechanical Tests
Tensile Test
Flattening Test
Impact Test

Impact Temperature

Grade	Impact Test Temperature	
	°F	°C
1	-50	-45
6	-50	-45

A333 Seamless and Welded Steel Pipe for Low-Temperature Service and Other Applications with Required Notch Toughness

Impact Requirements (Longitudinal Orientation)

Size of Specimen, mm	Minimum Average Notched Bar Impact Value of Each Set of Three Specimens[A]		Minimum Notched Bar Impact Value of One Specimen Only of a Set[A]	
	ft-lbf		ft-lbf	
10 by 10	13	18	10	14
10 by 7.5	10	14	8	11
10 by 6.67	9	12	7	9
10 by 5	7	9	5	7
10 by 3.33	5	7	3	4
10 by 25	4	5	3	4

[A] Straight line interpolation for intermediate values is permitted.

Permissible Variations

Wall Thickness

Not more than 12.5% under the nominal wall thickness specified

Weight per Foot

Weight of any individual length shall not vary more than 10% over and 3.5% under that specified for NPS 12 and under. Weight shall not vary more than 10% over and 5% under for pipe over NPS 12.

Outside Diameter

Round tubing

NPS Designator	Permissible Variation in Outside Diameter	
	Over	Under
Over 1-1/2 to 4, incl	+1/64"	-1/32"
Over 4 to 8, incl	+1/16"	-1/32"
Over 8 to 18, incl	+3/32"	-1/32"
Over 18 to 26, incl	+1/8"	-1/32"

Lengths

May be ordered in single or double random lengths or in uniform lengths.

Single Random – 16' - 22' inclusive

Double Random – 22' minimum with a minimum average of 35'

Marking Requirements on Each Length

Rolled, Die Stamped, Ink Printed or Stenciled (manufacturer's option)

- Manufacturer's name, brand or trademark
- Method of manufacture
- Size and wall
- LT, followed by impact test temperature
- QT, if pipe was quenched and tempered
- Grade
- ASTM A333

A501 Hot Formed Carbon Steel Structural Tubing

Specification A501 covers hot-formed, welded and seamless carbon steel square, round, rectangular, or special shape structural tubing for welded, riveted or bolted construction of bridges and buildings, and for general structural purposes. The size range for round is NPS 1/2"-24".

Mechanical Properties – Tensile Requirements

	Grade A	Grade B
Tensile Strength, min., psi	58,000	70,000
Yield Strength, min., psi	36,000	50,000
Elongation in 2 inch min.	23%	23%

Chemical Requirements

	Grade A		Grade B	
Element	**Heat Analysis**	**Product Analysis**	**Heat Analysis**	**Product Analysis**
Carbon, max %	0.26	.30	0.22[A]	0.26[A]
Manganese, max %	No requirement	No requirement	1.40[A]	1.45
Phosphorus, max %	0.035	0.045	0.030	0.040
Sulfur, max %	0.035	0.045	0.020	0.030
Copper (when specified), min %	0.20	0.20	0.20	0.18

[A]For each reduction of 0.01 percentage point below the specified maximum for carbon, an increase of 0.06 percentage point above the specified maximum for manganese is permitted, up to a maximum of 1.50% by heat analysis and 1.60% by product analysis.

Testing Requirements

Hydrostatic Testing
None specified

Mechanical Tests
Tensile Test
Bend Test – on square or rectangular tubing

Number of Tests
One tension test and one bend test from each lot

Permissible Variations

Wall Thickness
Not specified

Weight per foot
Shall not be less than the specified value by more than 3.5%

Outside Diameter
Round tubing

NPS	Over	Under
1-1/2 and smaller	+1/64"	-1/32"
2 and larger	+1%	-1%

A501 Hot Formed Carbon Steel Structural Tubing

Lengths

Produced in random lengths 16′–22′ or 32′–44′, in multiple lengths and in specific cut lengths

Cut Length Tolerances	Over	Under
22 feet and smaller	+1/2″	-1/4″
Over 22 feet	+3/4″	-1/4″

Marking Requirements On Each Length

Rolled, Die Stamped, Ink Printed or Paint Stenciled (manufacturer's option)

- Manufacturer's name, brand or trademark
- Size and thickness
- ASTM A501

Hot-Dipped Galvanizing

When required, weight of zinc shall comply with the requirements in the latest revision of Spec A53, with the additional provision that the manufacturer may determine the coating weight on outside surface only.

A523 Cable Circuit Piping

Specification A523 covers Seamless and Electric Resistance Welded steel pipe used as conduit for the installation of high-pressure pipe-type electrical cables. Suitable for welding and for forming operations involving flaring, belling and bending. Size Range: NPS 4-12

Mechanical Properties – Tensile Requirements

Seamless and ERW	Grade A	Grade B
Tensile Strength, min., psi	48,000	60,000
Yield Strength, min., psi	30,000	35,000

Chemical Requirements

	C max %		Mn max %		P max %		S max %	
	Heat	Product	Heat	Product	Heat	Product	Heat	Product
Grade A SMLS	0.22	0.25	0.90	0.95	0.035	0.045	0.050	0.060
Grade A ERW	0.21	0.25	0.90	0.95	0.035	0.045	0.050	0.060
Grade B SMLS	0.27	0.30	1.15	1.20	0.035	0.045	0.050	0.060
Grade B ERW	0.26	0.30	1.15	1.20	0.035	0.045	0.050	0.060

Testing Requirements

Hydrostatic Testing

Hydrostatic inspection test pressures are specified. Hydrostatic pressure to be maintained for not less than 5 seconds.

Mechanical Tests

Tensile Test – longitudinal

Weld Tensile – transverse

Flattening Test – seamless and ERW

Number of Tests

Tensile – one length from each lot of 500 or less

Flattening

Seamless – one length from each lot of 500 or less

ERW - Single lengths – crop ends from each length
Multiple lengths – crop ends from each length plus 2 intermediate rings

A523 Cable Circuit Piping

Permissible Variations

Wall Thickness

Minimum wall thickness, at any point, shall not be more than 12.5% under or more than 15.0% over the nominal wall thickness specified.

Weight per Foot

XS and lighter wall thickness: +5%
Heavier than XS wall thickness: +10%

Outside Diameter

Outside Diameter shall not vary more than +1% from specified
Outside Diameter End Tolerances (distance of 4" from each end)

NPS	Over	Under
10 and smaller	+1/15"	-1/64"
12	+3/32"	-1/32"

Lengths

Minimum permissible length – 35 ft. 0 in.

Maximum permissible length – 50 ft. 0 in.

Marking Requirements on Each Length

Roll, Stamp or Paint Stencil (manufacturer's option)

Manufacturer's name or brand, kind of pipe, i.e., Seamless (S) or ERW (E); grade, size, weight per foot or wall thickness and ASTM A523.

Coatings

Unless otherwise specified, the pipe shall not be given a mill coating of paint, oil or any other material inside or out.

API 5L Line Pipe

Specification API 5L covers seamless and welded pipe suitable for use in conveying gas, water, oil and other liquefied media.

Chemical Requirements

Specification	Grade	C_b	Mn_b	P	S	Si	Cr	Mo	Ni	V	Cb	Ti
API 5L 46th Ed (PSL 1) Seamless	A25	.21	.60	.030	.030	-	-	-	-	-	-	-
	A	.22	.90	.030	.030	-	-	-	-	-	-	-
	B	.28	1.20	.030	.030	-	-	-	-	c,d	c,d	d
	X42	.28	1.30	.030	.030	-	-	-	-	d	d	d
	X46	.28	1.40	.030	.030	-	-	-	-	d	d	d
	X52	.28	1.40	.030	.030	-	-	-	-	d	d	d
	X56	.28	1.40	.030	.030	-	-	-	-	d	d	d
	X60	.28[e]	1.40[e]	.030	.030	-	-	-	-	f	f	f
	X65	.28[e]	1.40[e]	.030	.030	-	-	-	-	f	f	f
	X70	.28[e]	1.40[e]	.030	.030	-	-	-	-	f	f	f
API 5L 46th Ed (PSL 1) Welded	A25	.21	.60	.030	.030	-	-	-	-	-	-	-
	A	.22	.90	.030	.030	-	-	-	-	-	-	-
	B	.26	1.20	.030	.030	-	-	-	-	c,d	c,d	d
	X42	.26	1.30	.030	.030	-	-	-	-	d	d	d
	X46	.26	1.40	.030	.030	-	-	-	-	d	d	d
	X52	.26	1.40	.030	.030	-	-	-	-	d	d	d
	X56	.26	1.40	.030	.030	-	-	-	-	d	d	d
	X60	.26[e]	1.40[e]	.030	.030	-	-	-	-	f	f	f
	X65	.26[e]	1.40[e]	.030	.030	-	-	-	-	f	f	f
	X70	.26[e]	1.65[e]	.030	.030	-	-	-	-	f	f	f

a. .50% max Cu, Ni, Cr and .15 max Mo. For grades up to and including X52, Cu, Cr and Ni shall not be added intentionally.
b. For each reduction of .01% below the max C, and increase of .05% Mn is permitted up to a max of 1.65% for grades B, X42 and X52, up to 1.75% for grades >X52 and < X70, and 2.0% for X70.
c. Unless otherwise agreed Cb + V < = .15%.
d. Cb + V + Ti < = .15%.
e. Unless otherwise agreed.
f. Unless otherwise agreed the sum of Cb + V + Ti < = .15%.

											Carbon Equivalent	
Specification	Grade	Cond	C_b	Mn_b	P	S	Si	V	Cb	Ti	Other	IIW	Pcm
API 5L 46th Ed (PSL 2) (Seamless & Welded)	B	R or N	.24	1.20	.025	.015	.40	c	c	.04	e	.43	.25
	X42	R or N	.24	1.20	.025	.015	.40	.06	.05	.04	e	.43	.25
	X46	N	.24	1.40	.025	.015	.40	.07	.05	.04	d, e	.43	.25
	X52	N	.24	1.40	.025	.015	.45	.10	.05	.04	d, e	.43	.25
	X56	N	.24	1.40	.025	.015	.45	.10[f]	.05	.04	d, e	.43	.25
	X60	N	.24[f]	1.40[f]	.025	.015	.45[f]	.10[f]	.05[f]	.04[f]	d, h	as agreed to	
API 5L 46th Ed (PSL 2) (Seamless & Welded)	B	Q	.18	1.40	.025	.015	.45	.05	.04	.04	e	.43	.25
	X42	Q	.18	1.40	.025	.015	.45	.06	.05	.04	e	.43	.25
	X46	Q	.18	1.40	.025	.015	.45	.07	.05	.04	e	.43	.25
	X52	Q	.18	1.50	.025	.015	.45	.10	.05	.04	e	.43	.25
	X56	Q	.18	1.50	.025	.015	.45	.10	.05	.04	d, e	.43	.25
	X60	Q	.18[f]	1.70[f]	.025	.015	.45[f]	(V + Cb + Ti < = .15)			e	.4	.25
	X65	Q	.18[f]	1.70[f]	.025	.015	.45[f]	(V + Cb + Ti < = .15)			h	.43	.25
	X70	Q	.18[f]	1.80[f]	.025	.015	.45[f]	(V + Cb + Ti < = .15)			h	.43	.25
	X80	Q	.18[f]	1.90[f]	.025	.015	.45[f]	(V + Cb + Ti < = .15)			i, j	as agreed to	

Chemical Requirements (cont)

Specification	Grade	Cond	C_b	Mn_b	P	S	Si	V	Cb	Ti	Other	Carbon Equivalent IIW	Carbon Equivalent Pcm
API 5L 46th Ed (PSL 2) (Welded Only)	B	M	.22	1.20	.025	.015	.45	.05	.05	.04	e	.43	.25
	X42	M	.22	1.30	.025	.015	.45	.05	.05	.04	e	.43	.25
	X46	M	.22	1.30	.025	.015	.45	.05	.05	.04	e	.43	.25
	X52	M	.22	1.40	.025	.015	.45	(V + Cb + Ti < = .15)			e	.43	.25
	X56	M	.22	1.40	.025	.015	.45	(V + Cb + Ti < = .15)			e	.43	.25
	X60	M	.12[f]	1.60[f]	.025	.015	.45[f]	(V + Cb + Ti < = .15)			h	.43	.25
	X65	M	.12[f]	1.60[f]	.025	.015	.45[f]	(V + Cb + Ti < = .15)			h	.43	.25
	X70	M	.12[f]	1.70[f]	.025	.015	.45[f]	(V + Cb + Ti < = .15)			h	.43	.25
	X80	M	.12[f]	1.85[f]	.025	.015	.45[f]	(V + Cb + Ti <= .15)			I	.43 f	.25
	X90	M	.12[f]	1.85[f]	.025	.015	.45[f]	(V + Cb + Ti < = .15)			I	-	.25
	X100	M	.12[f]	1.85[f]	.025	.015	.45[f]	(V + Cb + Ti < = .15)			i, j	-	.25
	X120	M	.12[f]	1.85[f]	.025	.015	.45[f]	(V + Cb + Ti < = .15)			i, j	-	.25

b. For Seamless pipe wall thickness > .787" CE shall be by agreement.
c. For each reduction of .01% below the max C, and increase of .05% Mn is permitted up to a max of 1.65% for grades B, X42 and X52, up to 1.75% for grades >X52 and < X70, and 2.0% for grades X70 and X80, 2.20 for grade > X80.
d. Unless otherwise agreed Cb + V < = .06%.
e. Cb + V + Ti < = .15%.
f. Unless otherwise agreed, .50% max Cu, .30% max Ni, .30% max CR and .15% max Mo.
g. Unless otherwise agreed.
h. Unless otherwise agreed the sum of Cb + V + Ti < = .15%.
i. Unless otherwise agreed .50% max Cu, Ni, Cr and Mo.
j. Unless otherwise agreed .50% max Cu, Cr, Mo and 1.00% max Ni.
k. .004% max B.

Tensile Properties – Tensile Requirements Seamless and Welded Pipe

Specification	Grade	Yield		Tensile		Y/T Ratio
API 5L 46th ed		Min.	Max.	Min.	Max.	Max.
PSL-1	A25	25,400	-	45,000	-	-
	A	30,500	-	48,600	-	-
	B	35,500	-	60,200	-	-
	X42	42,100	-	60,200	-	-
	X46	46,400	-	63,100	-	-
	X52	52,200	-	66,700	-	-
	X56	56,600	-	71,100	-	-
	X60	60,200	-	75,400	-	-
	X65	65,300	-	77,600	-	-
	X70	70,300	-	82,700	-	-
PSL-2	B	35,500	65,300	60,200	110,200	.93
	X42	42,100	71,800	60,200	100,200	.93
	X46	46,400	76,100	63,100	110,200	.93
	X52	52,200	76,900	66,700	110,200	.93
	X56	56,600	79,000	71,100	110,200	.93
	X60	60,200	81,900	75,400	110,200	.93
	X65	65,300	87,000	77,600	110,200	.93
	X70	70,300	92,100	82,700	110,200	.93
	X80	80,500	102,300	90,600	119,700	.93
	X90	90,600	112,400	100,800	132,700	.95
	X100	100,100	121,800	110,200	143,600	.97
	X120*	120,400	152,300	132,700	166,100	.99

*Only available as DSAW

API 5L Line Pipe

Testing Requirements

Hydrostatic Testing

This specification includes test pressures for light wall and heavy wall threaded pipe. For plain end pipe, the calculations for determining test pressures are provided.

Test pressures are held for not less than:

- Seamless (all sizes) – 5 seconds
- Welded (NPS 18 and smaller) – 5 seconds
  (NPS 20 and larger) – 10 seconds

Mechanical Tests

Tensile Test

- Seamless – longitudinal
- ERW – longitudinal and transverse

Charpy Tests – PSL 2

Flattening Test – ERW – All sizes

Number of Tests

Flattening – Non-expanded ERW for single lengths, crop ends from each length; for multiple lengths, crop ends from first and last pipe of each coil, plus 2 intermediate rings.

Tensile –

NPS	On One Length From Each Lot of
5 and smaller	400 or less
6 through 12	200 or less
14 and larger	100 or less

Permissible Variations

Wall Thickness

Seamless: 0.158"-0.983" wall, tolerance = -12.5 % / +15 %
> = 0.984" wall, tolerance = -0.120" / +0.146" or - /+ 10 % whichever is greater
(except if OD is >= 14" & wall is >=.984" then tolerance is -10 /+15%)

HFW: < = 0.197" wall, tolerance = - /+ .020"
= 0.198"-0.590" wall, tolerance = - /+ .10.0%"
≥ 0.591" wall, tolerance = - /+ .060"

Weight per Foot

For Single Lengths Special Plain End and Grade A25 – Not more than plus 10% minus 5%

For Single Lengths Other Pipe – Not more than plus 10% minus 3.5%

For Carload Lots – Not more than minus 1.75%

Note: NPS 4 OD and smaller may be weighed individually or in convenient lots; larger sizes by length

API 5L Line Pipe

Wall, Diameter and Out of Roundness

OD	Diameter Tolerance				Out of Round Tolerance			
	Pipe Body		Pipe Ends		Pipe Body		Pipe Ends	
	SMLS	Welded	SMLS	Welded	SMLS	Welded	SMLS	Welded
< 2.375	- 0.031 / + 0.016		- 0.016 / + 0.063		Included in the diameter tolerance			
2.375 - 6.625	-/+ 0.0075 (D)		- 0.016 / + 0.063		020 (D)		0.015 (D)	
> 6.625 - 24.00	-/+ 0.0075 (D)	-/+ 0.007 5 (D) up to -/+ 0.125	-/+ 0.005 (D) up to -/+ 0.063"		020 (D)		0.015 (D)	

Lengths

Plain End Pipe	Shortest Length in Entire Shipment	Minimum Avg. Length in Entire Shipment	Maximum Length
20' Nominal	9'0"	17'6"	22'6"
40' Nominal	14'0"	35'0"	45'0"
60' Nominal	21'0"	52'6"	65'0"
80' Nominal	28'0"	70'0"	85'0"

Marking Requirements on Each Length

Paint Stenciled or Die Stamped manufacturer's name or mark, Spec 5L, size, weight per foot, grade, process of manufacture, type of steel, length (NPS 4 and larger only). Test pressure when higher than tabulated (NPS 2 and larger only).

Supplemental Annexes

API Specification 5L 46th edition contains 15 Supplemental Annexes that address special conditions and/or additional requirements:

Annex A API Monogram Program: Use of the API Monogram by licensees
Annex B Manufacturing procedure qualification for PSL 2 pipe
Annex C Treatment of surface imperfections and defects
Annex D Repair welding procedure
Annex E Non-destructive inspection for pipe not required to meet Annex H, J, or N
Annex F Requirements for couplings (PSL 1 only)
Annex G PSL 2 pipe with resistance to ductile fracture propagation
Annex H PSL 2 pipe ordered for sour service
Annex I Pipe ordered as "Through the Flowline" (TFL) pipe
Annex J PSL 2 pipe ordered for offshore service
Annex K Non-destructive inspection for pipe ordered to meet Annex H, J, or N
Annex L Steel designations
Annex M Specification for welded jointers
Annex N PSL 2 pipe ordered for applications requiring longitudinal plastic strain capacity
Annex O Additional information for use of the API Monogram by licensees

API 5L Line Pipe

API Specification 5L PSL 1 and PSL 2 Comparison

Summary of Differences Between PSL1 and PSL2			
Parameter	**PSL 1**	**PSL 2**	**Reference**
Grade Range	L175 or A25 through L485 or X70	L245 or B through L830 or X120	Table 1 Table 2
Grade Suffix	—	R, N, Q or M	Table 1 Footnotes a, b
Type of Pipe Ends	Plain End, Belled End, Threaded, Special Coupling Pipe End	Plain End Only t < = 0.125"Square Cut >0.125" 30° Bevel Unless Otherwise Agreed	Table 2, 9.12.1.2 9.12.5, 9.12.5.3
Manufacturing Routes	Not Defined in Detail	Defined in Detail	Table 3
Manufacturing Procedure Qualification	—	If Agreed	7.2 c) 43) Annex B
Resistance to Ductile Fracture	—	If Agreed	7.2 c) 55) Annex G
For Sour Service	—	If Agreed	7.2 c) 56) Annex H
Offshore Pipe	—	If Agreed	7.2 c) 58) Annex J
Steel Making	—	Killed, Fine Grain Practice	8.3.2
Heat Treatment of Weld Seam and the HAZ of HFW Pipe	Simulate Normalizing OR by Agreement Other Methods	Heat Treated so as to Simulate Normalizing	8.8.1 - 8.8.2
Chemical Traceability of Heat Identity	Traceable Only Until All Related Chemical Tests are Performed and Conformance is Shown	Each Length of Pipe Must be Traceable Even After Completion of all Related Chemical Tests and Conformance is Shown	8.13.1 - 8.13.2
Physical Properties Traceability of Unit Identity	Traceable Only Until All Related Mechanical Tests are Performed and Conformance is Shown	Each Length of Pipe Must be Traceable Even After Completion of all Related Mechanical Tests and Conformance is Shown	8.13.1 - 8.13.2
Chemistry	For Each Grade, Maximum Value for C, Mn, P, S, V, Nb, Ti, Cu, Ni, Cr, Mo, and B	For Each Grade, Maximum Values for C, Si, Mn, P, S, V, Nb, Ti, Cu, Ni, Cr, Mo, and B	9.2 and Table 4 & 5
Carbon Equivalent CE	—	Maximum CE Required for Each Grade	Table 4 & 5
Yield Strength	Minimum Required for Each Grade	Minimum & Maximum Required for Each Grade	Table 6 & 7
Ultimate Tensile Strength	Minimum Required for Each Grade	Minimum & Maximum Required for Each Grade	Table 6 & 7
Yield to Tensile Ratio Maximum	—	Maximum Required for Each Grade	Table 6 & 7
CVN Impact Toughness	—	Testing Procedures and Minimum Requirements for Each Grade	9.8, Table 8, 10.2.3.3, Table 22
Drop Weight Tear Test DWT	—	By Agreement (D>=20")	7.2 c) 11), 9.9, 10.2.3.4, Table 18
Inspection Document in Accordance with ISO 10474:1991 or EN 10204:2004	If Agreed	Mandatory	10.1.2, 10.1.3
Non-destructive Inspection Full Length (100%), as Given in Table E.2	Grade B Quenched and Tempered SMLS Pipe and Other SMLS Grades, if Agreed	All SMLS Pipe	Annex E.3.1.2

Summary of Miscellaneous Pipe Specifications

ASTM A135	Two grades (A and B) of ERW pipe in NPS 3/4 to 30 with wall thickness of 0.500". The pipe is intended for conveying gas, vapor, water or other liquid.
ASTM A513	ERW carbon and alloy mechanical tubing in a variety of grades and sizes from NPS 1/2 to 15 in walls to 0.650".
ASTM A519	Several grades of carbon and alloy steel seamless mechanical tubing in sizes to NPS 12 and under.
ASTM A589	Four types of plain end or threaded and coupled carbon steel seamless or ERW pipe for use as water well casing.
ASTM A618	Hot-formed high-strength low-alloy structural tubing
CSA Z245.1	Canadian steel pipe specification for seamless and ERW pipe that is somewhat equivalent to the API 5L Line Pipe Specification.

U. S. Steel Tubular Products seamless line pipe installation at the Helix Beta Offshore California project.
Photo provided by Helix Energy Solutions Group.

STANDARD PIPE & LINE PIPE TABLES

Mill hydrostatic test pressure data was calculated on the basis of a fiber stress equal to a percentage of the specified minimum yield strength for the various sizes and grades. For specific information, ASTM standards and/or API Specification 5L should be consulted. Due to limited pump capacity, maximum hydrostatic test pressures for 22" and 24" OD seamless pipe are 2,700 and 2,300 psi, respectively. Some outside diameters, walls and grades are listed for information only and are not necessarily regular production items. The tables do not represent the full manufacturing capacity. Sizes, walls and grades not listed are subject to inquiry.

[1] As noted throughout the Line Pipe Tables, these grades are available in seamless only.

STANDARD PIPE & LINE PIPE TABLES

Outside Diameter NPS (inches)	Wall			Weight		Grade	Specified Minimum Strength (psi)		Mill Hydrostatic Test Pressure (psi)		Ultimate Burst (psi)
	Inches	Schedule Number	Class	lb/ft Plain End	Tons/ Mile		Yield	Tensile	Standard	Alternate	
OD 1.900											
NPS 1 1/2 OD 1.900 Seamless	0.145	40	STD	2.72	7.18	B	35,500	60,200	2,500	2,500	9,190
	0.200	80	XS	3.63	9.60	B	35,500	60,200	2,500	2,500	12,670
	0.281	160		4.86	12.84	B	35,500	60,200	2,500	2,500	17,810
OD 2.375											
NPS 2 2.375 Seamless & ERW	0.154	40	STD	3.66	9.65	B	35,500	60,200	2,500	2,500	7,810
	0.154	40	STD	3.66	9.65	C	40,000	70,000	2,500		9,080
	0.154	40	STD	3.66	9.65	X42	42,100	60,200	3,000	4,090	7,810
	0.154	40	STD	3.66	9.65	X46	46,400	63,100	3,000	4,510	8,180
	0.154	40	STD	3.66	9.65	X52	52,200	66,700	3,000	5,080	8,650
	0.154	40	STD	3.66	9.65	X56	56,600	71,100	3,000	5,510	9,220
	0.154	40	STD	3.66	9.65	X60	60,200	75,400	3,000	5,860	9,780
	0.154	40	STD	3.66	9.65	X65	65,300	77,600	3,000	6,350	10,060
	0.154	40	STD	3.66	9.65	X70	70,300	82,700	3,000	6,840	10,720
	0.218	80	XS	5.03	13.27	B	35,500	60,200	2,500	2,500	11,050
	0.218	80	XS	5.03	13.27	C	40,000	70,000	2,500		12,850
	0.218	80	XS	5.03	13.27	X42	42,100	60,200	3,000	5,800	11,050
	0.218	80	XS	5.03	13.27	X46	46,400	63,100	3,000	6,390	11,580
	0.218	80	XS	5.03	13.27	X52	52,200	66,700	3,000	7,190	12,240
	0.218	80	XS	5.03	13.27	X56	56,600	71,100	3,000	7,260	13,050
	0.218	80	XS	5.03	13.27	X60	60,200	75,400	3,000	7,260	13,840
	0.218	80	XS	5.03	13.27	X65	65,300	77,600	3,000	7,260	14,250
	0.218	80	XS	5.03	13.27	X70	70,300	82,700	3,000	7,260	15,180
	0.344	160		7.47	19.72	B	35,500	60,200	2,500	2,500	17,440
	0.344	160		7.47	19.72	C	40,000	70,000	2,500		20,280
	0.344	160		7.47	19.72	X42	42,100	60,200	3,000	7,260	17,440
	0.344	160		7.47	19.72	X46	46,400	63,100	3,000	7,260	18,280
	0.344	160		7.47	19.72	X52	52,200	66,700	3,000	7,260	19,320
	0.344	160		7.47	19.72	X56	56,600	71,100	3,000	7,260	20,600
	0.344	160		7.47	19.72	X60	60,200	75,400	3,000	7,260	21,840
	0.344	160		7.47	19.72	X65	65,300	77,600	3,000	7,260	22,480
	0.344	160		7.47	19.72	X70	70,300	82,700	3,000	7,260	23,960
OD 2.875											
NPS 2 1/2 OD 2.875 Seamless & ERW	0.203	40	STD	5.80	15.31	B	35,500	60,200	2,500	2,500	8,500
	0.203	40	STD	5.80	15.31	C	40,000	70,000	2,500		9,890
	0.203	40	STD	5.80	15.31	X42	42,100	60,200	3,000	4,460	8,500
	0.203	40	STD	5.80	15.31	X46	46,400	63,100	3,000	4,910	8,910
	0.203	40	STD	5.80	15.31	X52	52,200	66,700	3,000	5,530	9,420
	0.203	40	STD	5.80	15.31	X56	56,600	71,100	3,000	5,990	10,040
	0.203	40	STD	5.80	15.31	X60	60,200	75,400	3,000	6,380	10,650
	0.203	40	STD	5.80	15.31	X65	65,300	77,600	3,000	6,920	10,960
	0.203	40	STD	5.80	15.31	X70	70,300	82,700	3,000	7,260	11,680
	0.276	80	XS	7.67	20.24	B	35,500	60,200	2,500	2,500	11,560
	0.276	80	XS	7.67	20.24	C	40,000	70,000	2,500		13,440

NOTE: This table is meant to be an abbreviated reference tool for the most common sizes and grades offered by U. S. Steel Tubular Products. To download a PDF version of the performance data or a complete listing, visit www.usstubular.com/connections/sl.

Outside Diameter NPS (inches)	Wall			Weight		Grade	Specified Minimum Strength (psi)		Mill Hydrostatic Test Pressure (psi)		Ultimate Burst (psi)
	Inches	Schedule Number	Class	lb/ft Plain End	Tons/ Mile		Yield	Tensile	Standard	Alternate	
OD 2.875											
NPS 2 1/2 OD 2.875 Seamless & ERW	0.276	80	XS	7.67	20.24	X42	42,100	60,200	3,000	6,060	11,560
	0.276	80	XS	7.67	20.24	X46	46,400	63,100	3,000	6,680	12,120
	0.276	80	XS	7.67	20.24	X52	52,200	66,700	3,000	7,260	12,810
	0.276	80	XS	7.67	20.24	X56	56,600	71,100	3,000	7,260	13,650
	0.276	80	XS	7.67	20.24	X60	60,200	75,400	3,000	7,260	14,480
	0.276	80	XS	7.67	20.24	X65	65,300	77,600	3,000	7,260	14,900
	0.276	80	XS	7.67	20.24	X70	70,300	82,700	3,000	7,260	15,880
	0.375	160		10.02	26.46	B	35,500	60,200	2,500	2,500	15,700
	0.375	160		10.02	26.46	C	40,000	70,000	2,500		18,260
	0.375	160		10.02	26.46	X42	42,100	60,200	3,000	7,260	15,700
	0.375	160		10.02	26.46	X46	46,400	63,100	3,000	7,260	16,460
	0.375	160		10.02	26.46	X52	52,200	66,700	3,000	7,260	17,400
	0.375	160		10.02	26.46	X56	56,600	71,100	3,000	7,260	18,550
	0.375	160		10.02	26.46	X60	60,200	75,400	3,000	7,260	19,670
	0.375	160		10.02	26.46	X65	65,300	77,600	3,000	7,260	20,240
	0.375	160		10.02	26.46	X70	70,300	82,700	3,000	7,260	21,570
OD 3.500											
NPS 3 OD 3.500 Seamless & ERW	0.216	40	STD	7.58	20.02	B	35,500	60,200	2,500	2,500	7,430
	0.216	40	STD	7.58	20.02	C	40,000	70,000	2,500		8,640
	0.216	40	STD	7.58	20.02	X42	42,100	60,200	3,000	3,900	7,430
	0.216	40	STD	7.58	20.02	X46	46,400	63,100	3,000	4,300	7,790
	0.216	40	STD	7.58	20.02	X52	52,200	66,700	3,000	4,830	8,230
	0.216	40	STD	7.58	20.02	X56	56,600	71,100	3,000	5,240	8,780
	0.216	40	STD	7.58	20.02	X60	60,200	75,400	3,000	5,570	9,310
	0.216	40	STD	7.58	20.02	X65	65,300	77,600	3,000	6,040	9,580
	0.216	40	STD	7.58	20.02	X70	70,300	82,700	3,000	6,510	10,210
	0.250			8.69	22.93	B	35,500	60,200	2,500	2,500	8,600
	0.250			8.69	22.93	C	40,000	70,000	2,500		10,000
	0.250			8.69	22.93	X42	42,100	60,200	3,000	4,510	8,600
	0.250			8.69	22.93	X46	46,400	63,100	3,000	4,970	9,010
	0.250			8.69	22.93	X52	52,200	66,700	3,000	5,590	9,530
	0.250			8.69	22.93	X56	56,600	71,100	3,000	6,060	10,160
	0.250			8.69	22.93	X60	60,200	75,400	3,000	6,450	10,770
	0.250			8.69	22.93	X65	65,300	77,600	3,000	7,000	11,090
	0.250			8.69	22.93	X70	70,300	82,700	3,000	7,260	11,810
	0.281			9.67	25.53	B	35,500	60,200	2,500	2,500	9,670
	0.281			9.67	25.53	C	40,000	70,000	2,500		11,240
	0.281			9.67	25.53	X42	42,100	60,200	3,000	5,070	9,670
	0.281			9.67	25.53	X46	46,400	63,100	3,000	5,590	10,130
	0.281			9.67	25.53	X52	52,200	66,700	3,000	6,290	10,710
	0.281			9.67	25.53	X56	56,600	71,100	3,000	6,820	11,420
	0.281			9.67	25.53	X60	60,200	75,400	3,000	7,250	12,110
	0.281			9.67	25.53	X65	65,300	77,600	3,000	7,260	12,460
	0.281			9.67	25.53	X70	70,300	82,700	3,000	7,260	13,280

STANDARD PIPE & LINE PIPE TABLES

Outside Diameter NPS (inches)	Wall			Weight		Grade	Specified Minimum Strength (psi)		Mill Hydrostatic Test Pressure (psi)		Ultimate Burst (psi)
	Inches	Schedule Number	Class	lb/ft Plain End	Tons/ Mile		Yield	Tensile	Standard	Alternate	
OD 3.500											
NPS 3 OD 3.500 Seamless & ERW	0.300	80	XS	10.26	27.09	B	35,500	60,200	2,500	2,500	10,320
	0.300	80	XS	10.26	27.09	C	40,000	70,000	2,500		12,000
	0.300	80	XS	10.26	27.09	X42	42,100	60,200	3,000	5,410	10,320
	0.300	80	XS	10.26	27.09	X46	46,400	63,100	3,000	5,970	10,820
	0.300	80	XS	10.26	27.09	X52	52,200	66,700	3,000	6,710	11,430
	0.300	80	XS	10.26	27.09	X56	56,600	71,100	3,000	7,260	12,190
	0.300	80	XS	10.26	27.09	X60	60,200	75,400	3,000	7,260	12,930
	0.300	80	XS	10.26	27.09	X65	65,300	77,600	3,000	7,260	13,300
	0.300	80	XS	10.26	27.09	X70	70,300	82,700	3,000	7,260	14,180
	0.438	160		14.34	37.85	B	35,500	60,200	2,500	2,500	15,070
	0.438	160		14.34	37.85	C	40,000	70,000	2,500		17,520
	0.438	160		14.34	37.85	X42	42,100	60,200	3,000	7,260	15,070
	0.438	160		14.34	37.85	X46	46,400	63,100	3,000	7,260	15,790
	0.438	160		14.34	37.85	X52	52,200	66,700	3,000	7,260	16,690
	0.438	160		14.34	37.85	X56	56,600	71,100	3,000	7,260	17,800
	0.438	160		14.34	37.85	X60	60,200	75,400	3,000	7,260	18,870
	0.438	160		14.34	37.85	X65	65,300	77,600	3,000	7,260	19,420
	0.438	160		14.34	37.85	X70	70,300	82,700	3,000	7,260	20,700
OD 4.000											
NPS 3 1/2 OD 4.000 Seamless & ERW	0.226	40	STD	9.12	24.07	B	35,500	60,200	2,410	2,800	6,800
	0.226	40	STD	9.12	24.07	C	40,000	70,000	2,710		7,910
	0.226	40	STD	9.12	24.07	X42	42,100	60,200	2,850	3,570	6,800
	0.226	40	STD	9.12	24.07	X46	46,400	63,100	3,000	3,930	7,130
	0.226	40	STD	9.12	24.07	X52	52,200	66,700	3,000	4,420	7,540
	0.226	40	STD	9.12	24.07	X56	56,600	71,100	3,000	4,800	8,030
	0.226	40	STD	9.12	24.07	X60	60,200	75,400	3,000	5,100	8,520
	0.226	40	STD	9.12	24.07	X65	65,300	77,600	3,000	5,530	8,770
	0.226	40	STD	9.12	24.07	X70	70,300	82,700	3,000	5,960	9,350
	0.250			10.02	26.46	B	35,500	60,200	2,660	2,800	7,530
	0.250			10.02	26.46	C	40,000	70,000	2,800		8,750
	0.250			10.02	26.46	X42	42,100	60,200	3,000	3,950	7,530
	0.250			10.02	26.46	X46	46,400	63,100	3,000	4,350	7,890
	0.250			10.02	26.46	X52	52,200	66,700	3,000	4,890	8,340
	0.250			10.02	26.46	X56	56,600	71,100	3,000	5,310	8,890
	0.250			10.02	26.46	X60	60,200	75,400	3,000	5,640	9,430
	0.250			10.02	26.46	X65	65,300	77,600	3,000	6,120	9,700
	0.250			10.02	26.46	X70	70,300	82,700	3,000	6,590	10,340
	0.281			11.17	29.49	B	35,500	60,200	2,800	2,800	8,460
	0.281			11.17	29.49	C	40,000	70,000	2,800		9,840
	0.281			11.17	29.49	X42	42,100	60,200	3,000	4,440	8,460
	0.281			11.17	29.49	X46	46,400	63,100	3,000	4,890	8,870
	0.281			11.17	29.49	X52	52,200	66,700	3,000	5,500	9,370
	0.281			11.17	29.49	X56	56,600	71,100	3,000	5,960	9,990
	0.281			11.17	29.49	X60	60,200	75,400	3,000	6,340	10,590

NOTE: This table is meant to be an abbreviated reference tool for the most common sizes and grades offered by U. S. Steel Tubular Products. To download a PDF version of the performance data or a complete listing, visit www.usstubular.com/connections/sl.

Outside Diameter NPS (inches)	Wall			Weight		Grade	Specified Minimum Strength (psi)		Mill Hydrostatic Test Pressure (psi)		Ultimate Burst (psi)
	Inches	Schedule Number	Class	lb/ft Plain End	Tons/ Mile		Yield	Tensile	Standard	Alternate	
OD 4.000											
NPS 3 1/2 OD 4.000 Seamless & ERW	0.281			11.17	29.49	X65	65,300	77,600	3,000	6,880	10,900
	0.281			11.17	29.49	X70	70,300	82,700	3,000	7,260	11,620
	0.318	80	XS	12.52	33.04	B	35,500	60,200	2,800	2,800	9,570
	0.318	80	XS	12.52	33.04	C	40,000	70,000	2,800		11,130
	0.318	80	XS	12.52	33.04	X42	42,100	60,200	3,000	5,020	9,570
	0.318	80	XS	12.52	33.04	X46	46,400	63,100	3,000	5,530	10,030
	0.318	80	XS	12.52	33.04	X52	52,200	66,700	3,000	6,220	10,610
	0.318	80	XS	12.52	33.04	X56	56,600	71,100	3,000	6,750	11,300
	0.318	80	XS	12.52	33.04	X60	60,200	75,400	3,000	7,180	11,990
	0.318	80	XS	12.52	33.04	X65	65,300	77,600	3,000	7,260	12,340
	0.318	80	XS	12.52	33.04	X70	70,300	82,700	3,000	7,260	13,150
	0.438			16.68	44.03	B	35,500	60,200	2,800	2,800	13,180
	0.438			16.68	44.03	C	40,000	70,000	2,800		15,330
	0.438			16.68	44.03	X42	42,100	60,200	3,000	6,950	13,180
	0.438			16.68	44.03	X46	46,400	63,100	3,000	7,260	13,820
	0.438			16.68	44.03	X52	52,200	66,700	3,000	7,260	14,610
	0.438			16.68	44.03	X56	56,600	71,100	3,000	7,260	15,570
	0.438			16.68	44.03	X60	60,200	75,400	3,000	7,260	16,510
	0.438			16.68	44.03	X65	65,300	77,600	3,000	7,260	16,990
	0.438			16.68	44.03	X70	70,300	82,700	3,000	7,260	18,110
NPS 3 1/2 OD 4.000 Seamless	0.636		XXS	22.87	60.38	B	35,500	60,200	2,800	2,800	19,140
	0.636		XXS	22.87	60.38	C	40,000	70,000	2,800		22,260
	0.636		XXS	22.87	60.38	X42	42,100	60,200	3,000	7,260	19,140
	0.636		XXS	22.87	60.38	X46	46,400	63,100	3,000	7,260	20,070
	0.636		XXS	22.87	60.38	X52	52,200	66,700	3,000	7,260	21,210
	0.636		XXS	22.87	60.38	X56	56,600	71,100	3,000	7,260	22,610
	0.636		XXS	22.87	60.38	X60	60,200	75,400	3,000	7,260	23,980
	0.636		XXS	22.87	60.38	X65	65,300	77,600	3,000	7,260	24,680
	0.636		XXS	22.87	60.38	X70	70,300	82,700	3,000	7,260	26,300
OD 4.500											
NPS 4 OD 4.500 ERW	0.188			8.67	22.88	B	35,500	60,200	1,780	2,220	5,030
	0.188			8.67	22.88	C	40,000	70,000	2,010		5,850
	0.188			8.67	22.88	X42	42,100	60,200	2,110	2,640	5,030
	0.188			8.67	22.88	X46	46,400	63,100	2,330	2,910	5,270
	0.188			8.67	22.88	X52	52,200	66,700	2,620	3,270	5,570
	0.188			8.67	22.88	X56	56,600	71,100	2,840	3,550	5,940
	0.188			8.67	22.88	X60	60,200	75,400	3,000	3,770	6,300
	0.188			8.67	22.88	X65	65,300	77,600	3,000	4,090	6,480
	0.188			8.67	22.88	X70	70,300	82,700	3,000	4,410	6,910
	0.188			8.67	22.88	X80[1]	80,500	90,600	3,000	5,040	7,570
	0.203			9.32	24.62	B	35,500	60,200	1,920	2,400	5,430
	0.203			9.32	24.62	C	40,000	70,000	2,170		6,320
	0.203			9.32	24.62	X42	42,100	60,200	2,280	2,850	5,430
	0.203			9.32	24.62	X46	46,400	63,100	2,510	3,140	5,690

1. Available in seamless only.

STANDARD PIPE & LINE PIPE TABLES

Outside Diameter NPS (inches)	Wall			Weight		Grade	Specified Minimum Strength (psi)		Mill Hydrostatic Test Pressure (psi)		Ultimate Burst (psi)
	Inches	Schedule Number	Class	lb/ft Plain End	Tons/ Mile		Yield	Tensile	Standard	Alternate	
OD 4.500											
NPS 4 OD 4.500 ERW	0.203			9.32	24.62	X52	52,200	66,700	2,830	3,530	6,020
	0.203			9.32	24.62	X56	56,600	71,100	3,000	3,830	6,410
	0.203			9.32	24.62	X60	60,200	75,400	3,000	4,070	6,800
	0.203			9.32	24.62	X65	65,300	77,600	3,000	4,420	7,000
	0.203			9.32	24.62	X70	70,300	82,700	3,000	4,760	7,460
	0.203			9.32	24.62	X80[1]	80,500	90,600	3,000	5,450	8,170
	0.219			10.02	26.46	B	35,500	60,200	2,070	2,590	5,860
	0.219			10.02	26.46	C	40,000	70,000	2,340		6,810
	0.219			10.02	26.46	X42	42,100	60,200	2,460	3,070	5,860
	0.219			10.02	26.46	X46	46,400	63,100	2,710	3,390	6,140
	0.219			10.02	26.46	X52	52,200	66,700	3,000	3,810	6,490
	0.219			10.02	26.46	X56	56,600	71,100	3,000	4,130	6,920
	0.219			10.02	26.46	X60	60,200	75,400	3,000	4,390	7,340
	0.219			10.02	26.46	X65	65,300	77,600	3,000	4,770	7,550
	0.219			10.02	26.46	X70	70,300	82,700	3,000	5,130	8,050
	0.219			10.02	26.46	X80[1]	80,500	90,600	3,000	5,880	8,820
NPS 4 OD 4.500 Seamless & ERW	0.237	40	STD	10.80	28.51	B	35,500	60,200	2,240	2,800	6,340
	0.237	40	STD	10.80	28.51	C	40,000	70,000	2,530		7,370
	0.237	40	STD	10.80	28.51	X42	42,100	60,200	2,660	3,330	6,340
	0.237	40	STD	10.80	28.51	X46	46,400	63,100	2,930	3,670	6,650
	0.237	40	STD	10.80	28.51	X52	52,200	66,700	3,000	4,120	7,030
	0.237	40	STD	10.80	28.51	X56	56,600	71,100	3,000	4,470	7,490
	0.237	40	STD	10.80	28.51	X60	60,200	75,400	3,000	4,760	7,940
	0.237	40	STD	10.80	28.51	X65	65,300	77,600	3,000	5,160	8,170
	0.237	40	STD	10.80	28.51	X70	70,300	82,700	3,000	5,550	8,710
	0.237	40	STD	10.80	28.51	X80[1]	80,500	90,600	3,000	6,360	9,540
	0.250			11.36	29.99	B	35,500	60,200	2,370	2,800	6,690
	0.250			11.36	29.99	C	40,000	70,000	2,670		7,780
	0.250			11.36	29.99	X42	42,100	60,200	2,810	3,510	6,690
	0.250			11.36	29.99	X46	46,400	63,100	3,000	3,870	7,010
	0.250			11.36	29.99	X52	52,200	66,700	3,000	4,350	7,410
	0.250			11.36	29.99	X56	56,600	71,100	3,000	4,720	7,900
	0.250			11.36	29.99	X60	60,200	75,400	3,000	5,020	8,380
	0.250			11.36	29.99	X65	65,300	77,600	3,000	5,440	8,620
	0.250			11.36	29.99	X70	70,300	82,700	3,000	5,860	9,190
	0.250			11.36	29.99	X80[1]	80,500	90,600	3,000	6,710	10,070
	0.281			12.67	33.46	B	35,500	60,200	2,660	2,800	7,520
	0.281			12.67	33.46	C	40,000	70,000	2,800		8,740
	0.281			12.67	33.46	X42	42,100	60,200	3,000	3,940	7,520
	0.281			12.67	33.46	X46	46,400	63,100	3,000	4,350	7,880
	0.281			12.67	33.46	X52	52,200	66,700	3,000	4,890	8,330
	0.281			12.67	33.46	X56	56,600	71,100	3,000	5,300	8,880
	0.281			12.67	33.46	X60	60,200	75,400	3,000	5,640	9,420
	0.281			12.67	33.46	X65	65,300	77,600	3,000	6,120	9,690

1. Available in seamless only.

NOTE: This table is meant to be an abbreviated reference tool for the most common sizes and grades offered by U. S. Steel Tubular Products. To download a PDF version of the performance data or a complete listing, visit www.usstubular.com/connections/sl.

Outside Diameter NPS (inches)	Wall			Weight		Grade	Specified Minimum Strength (psi)		Mill Hydrostatic Test Pressure (psi)		Ultimate Burst (psi)
	Inches	Schedule Number	Class	lb/ft Plain End	Tons/ Mile		Yield	Tensile	Standard	Alternate	
OD 4.500											
NPS 4 OD 4.500 Seamless & ERW	0.281			12.67	33.46	X70	70,300	82,700	3,000	6,580	10,330
	0.281			12.67	33.46	X80[1]	80,500	90,600	3,000	7,260	11,310
	0.312			13.97	36.88	B	35,500	60,200	2,800	2,800	8,350
	0.312			13.97	36.88	C	40,000	70,000	2,800		9,710
	0.312			13.97	36.88	X42	42,100	60,200	3,000	4,380	8,350
	0.312			13.97	36.88	X46	46,400	63,100	3,000	4,830	8,750
	0.312			13.97	36.88	X52	52,200	66,700	3,000	5,430	9,250
	0.312			13.97	36.88	X56	56,600	71,100	3,000	5,890	9,860
	0.312			13.97	36.88	X60	60,200	75,400	3,000	6,260	10,460
	0.312			13.97	36.88	X65	65,300	77,600	3,000	6,790	10,760
	0.312			13.97	36.88	X70	70,300	82,700	3,000	7,260	11,470
	0.312			13.97	36.88	X80[1]	80,500	90,600	3,000	7,260	12,560
	0.337	80	XS	15.00	39.59	B	35,500	60,200	2,800	2,800	9,020
	0.337	80	XS	15.00	39.59	C	40,000	70,000	2,800		10,480
	0.337	80	XS	15.00	39.59	X42	42,100	60,200	3,000	4,730	9,020
	0.337	80	XS	15.00	39.59	X46	46,400	63,100	3,000	5,210	9,450
	0.337	80	XS	15.00	39.59	X52	52,200	66,700	3,000	5,860	9,990
	0.337	80	XS	15.00	39.59	X56	56,600	71,100	3,000	6,360	10,650
	0.337	80	XS	15.00	39.59	X60	60,200	75,400	3,000	6,760	11,290
	0.337	80	XS	15.00	39.59	X65	65,300	77,600	3,000	7,260	11,620
	0.337	80	XS	15.00	39.59	X70	70,300	82,700	3,000	7,260	12,390
	0.337	80	XS	15.00	39.59	X80[1]	80,500	90,600	3,000	7,260	13,570
	0.438	120		19.02	50.21	B	35,500	60,200	2,800	2,800	11,720
	0.438	120		19.02	50.21	C	40,000	70,000	2,800		13,630
	0.438	120		19.02	50.21	X42	42,100	60,200	3,000	6,150	11,720
	0.438	120		19.02	50.21	X46	46,400	63,100	3,000	6,770	12,280
	0.438	120		19.02	50.21	X52	52,200	66,700	3,000	7,260	12,980
	0.438	120		19.02	50.21	X56	56,600	71,100	3,000	7,260	13,840
	0.438	120		19.02	50.21	X60	60,200	75,400	3,000	7,260	14,680
	0.438	120		19.02	50.21	X65	65,300	77,600	3,000	7,260	15,110
	0.438	120		19.02	50.21	X70	70,300	82,700	3,000	7,260	16,100
	0.438	120		19.02	50.21	X80	80,500	90,600	3,000	7,260	17,640
NPS 4 OD 4.500 Seamless	0.531	160		22.53	59.48	B	35,500	60,200	2,800	2,800	14,210
	0.531	160		22.53	59.48	C	40,000	70,000	2,800		16,520
	0.531	160		22.53	59.48	X42	42,100	60,200	3,000	7,260	14,210
	0.531	160		22.53	59.48	X46	46,400	63,100	3,000	7,260	14,890
	0.531	160		22.53	59.48	X52	52,200	66,700	3,000	7,260	15,740
	0.531	160		22.53	59.48	X56	56,600	71,100	3,000	7,260	16,780
	0.531	160		22.53	59.48	X60	60,200	75,400	3,000	7,260	17,790
	0.531	160		22.53	59.48	X65	65,300	77,600	3,000	7,260	18,310
	0.531	160		22.53	59.48	X70	70,300	82,700	3,000	7,260	19,520
	0.531	160		22.53	59.48	X80	80,500	90,600	3,000	7,260	21,380

1. Available in seamless only.

STANDARD PIPE & LINE PIPE TABLES

Outside Diameter NPS (inches)	Wall			Weight		Grade	Specified Minimum Strength (psi)		Mill Hydrostatic Test Pressure (psi)		Ultimate Burst (psi)
	Inches	Schedule Number	Class	lb/ft Plain End	Tons/ Mile		Yield	Tensile	Standard	Alternate	
OD 5.563											
NPS 5 OD 5.563 Seamless & ERW	0.258	40	STD	14.63	38.63	B	35,500	60,200	1,980	2,470	5,580
	0.258	40	STD	14.63	38.63	C	40,000	70,000	2,230		6,490
	0.258	40	STD	14.63	38.63	X42	42,100	60,200	2,340	2,930	5,580
	0.258	40	STD	14.63	38.63	X46	46,400	63,100	2,580	3,230	5,850
	0.258	40	STD	14.63	38.63	X52	52,200	66,700	2,910	3,630	6,190
	0.258	40	STD	14.63	38.63	X56	56,600	71,100	3,000	3,940	6,590
	0.258	40	STD	14.63	38.63	X60	60,200	75,400	3,000	4,190	6,990
	0.258	40	STD	14.63	38.63	X65	65,300	77,600	3,000	4,540	7,200
	0.258	40	STD	14.63	38.63	X70	70,300	82,700	3,000	4,890	7,670
	0.258	40	STD	14.63	38.63	X80[1]	80,500	90,600	3,000	5,600	8,400
	0.281			15.87	41.89	B	35,500	60,200	2,150	2,690	6,080
	0.281			15.87	41.89	C	40,000	70,000	2,420		7,070
	0.281			15.87	41.89	X42	42,100	60,200	2,550	3,190	6,080
	0.281			15.87	41.89	X46	46,400	63,100	2,810	3,520	6,370
	0.281			15.87	41.89	X52	52,200	66,700	3,000	3,960	6,740
	0.281			15.87	41.89	X56	56,600	71,100	3,000	4,290	7,180
	0.281			15.87	41.89	X60	60,200	75,400	3,000	4,560	7,620
	0.281			15.87	41.89	X65	65,300	77,600	3,000	4,950	7,840
	0.281			15.87	41.89	X70	70,300	82,700	3,000	5,330	8,350
	0.281			15.87	41.89	X80[1]	80,500	90,600	3,000	6,100	9,150
	0.312			17.51	46.24	B	35,500	60,200	2,390	2,800	6,750
	0.312			17.51	46.24	C	40,000	70,000	2,690		7,850
	0.312			17.51	46.24	X42	42,100	60,200	2,830	3,540	6,750
	0.312			17.51	46.24	X46	46,400	63,100	3,000	3,900	7,080
	0.312			17.51	46.24	X52	52,200	66,700	3,000	4,390	7,480
	0.312			17.51	46.24	X56	56,600	71,100	3,000	4,760	7,980
	0.312			17.51	46.24	X60	60,200	75,400	3,000	5,060	8,460
	0.312			17.51	46.24	X65	65,300	77,600	3,000	5,490	8,700
	0.312			17.51	46.24	X70	70,300	82,700	3,000	5,910	9,280
	0.312			17.51	46.24	X80[1]	80,500	90,600	3,000	6,770	10,160
	0.344			19.19	50.67	B	35,500	60,200	2,630	2,800	7,450
	0.344			19.19	50.67	C	40,000	70,000	2,800		8,660
	0.344			19.19	50.67	X42	42,100	60,200	3,000	3,910	7,450
	0.344			19.19	50.67	X46	46,400	63,100	3,000	4,300	7,800
	0.344			19.19	50.67	X52	52,200	66,700	3,000	4,840	8,250
	0.344			19.19	50.67	X56	56,600	71,100	3,000	5,250	8,790
	0.344			19.19	50.67	X60	60,200	75,400	3,000	5,580	9,330
	0.344			19.19	50.67	X65	65,300	77,600	3,000	6,060	9,600
	0.344			19.19	50.67	X70	70,300	82,700	3,000	6,520	10,230
	0.344			19.19	50.67	X80[1]	80,500	90,600	3,000	7,260	11,200
	0.375	80	XS	20.80	54.91	B	35,500	60,200	2,800	2,800	8,120
	0.375	80	XS	20.80	54.91	C	40,000	70,000	2,800		9,440
	0.375	80	XS	20.80	54.91	X42	42,100	60,200	3,000	4,260	8,120
	0.375	80	XS	20.80	54.91	X46	46,400	63,100	3,000	4,690	8,510

1. Available in seamless only.

NOTE: This table is meant to be an abbreviated reference tool for the most common sizes and grades offered by U. S. Steel Tubular Products. To download a PDF version of the performance data or a complete listing, visit www.usstubular.com/connections/sl.

Outside Diameter NPS (inches)	Wall			Weight		Grade	Specified Minimum Strength (psi)		Mill Hydrostatic Test Pressure (psi)		Ultimate Burst (psi)
	Inches	Schedule Number	Class	lb/ft Plain End	Tons/ Mile		Yield	Tensile	Standard	Alternate	
OD 5.563											
NPS 5 OD 5.563 Seamless & ERW	0.375	80	XS	20.80	54.91	X52	52,200	66,700	3,000	5,280	8,990
	0.375	80	XS	20.80	54.91	X56	56,600	71,100	3,000	5,720	9,590
	0.375	80	XS	20.80	54.91	X60	60,200	75,400	3,000	6,090	10,170
	0.375	80	XS	20.80	54.91	X65	65,300	77,600	3,000	6,600	10,460
	0.375	80	XS	20.80	54.91	X70	70,300	82,700	3,000	7,110	11,150
	0.375	80	XS	20.80	54.91	X80[1]	80,500	90,600	3,000	7,260	12,210
NPS 5 OD 5.563 Seamless	0.500	120		27.06	71.44	B	35,500	60,200	2,800	2,800	10,820
	0.500	120		27.06	71.44	C	40,000	70,000	2,800		12,580
	0.500	120		27.06	71.44	X42	42,100	60,200	3,000	5,680	10,820
	0.500	120		27.06	71.44	X46	46,400	63,100	3,000	6,260	11,340
	0.500	120		27.06	71.44	X52	52,200	66,700	3,000	7,040	11,990
	0.500	120		27.06	71.44	X56	56,600	71,100	3,000	7,260	12,780
	0.500	120		27.06	71.44	X60	60,200	75,400	3,000	7,260	13,550
	0.500	120		27.06	71.44	X65	65,300	77,600	3,000	7,260	13,950
	0.500	120		27.06	71.44	X70	70,300	82,700	3,000	7,260	14,870
	0.500	120		27.06	71.44	X80	80,500	90,600	3,000	7,260	16,290
	0.625	160		32.99	87.10	B	35,500	60,200	2,800	2,800	13,530
	0.625	160		32.99	87.10	C	40,000	70,000	2,800		15,730
	0.625	160		32.99	87.10	X42	42,100	60,200	3,000	7,090	13,530
	0.625	160		32.99	87.10	X46	46,400	63,100	3,000	7,260	14,180
	0.625	160		32.99	87.10	X52	52,200	66,700	3,000	7,260	14,990
	0.625	160		32.99	87.10	X56	56,600	71,100	3,000	7,260	15,980
	0.625	160		32.99	87.10	X60	60,200	75,400	3,000	7,260	16,940
	0.625	160		32.99	87.10	X65	65,300	77,600	3,000	7,260	17,440
	0.625	160		32.99	87.10	X70	70,300	82,700	3,000	7,260	18,580
	0.625	160		32.99	87.10	X80	80,500	90,600	3,000	7,260	20,360
OD 6.625											
NPS 6 OD 6.625 Seamless & ERW	0.250			17.04	44.98	B	35,500	60,200	1,610	2,010	4,540
	0.250			17.04	44.98	C	40,000	70,000	1,810		5,280
	0.250			17.04	44.98	X42	42,100	60,200	2,380	2,380	4,540
	0.250			17.04	44.98	X46	46,400	63,100	2,630	2,630	4,760
	0.250			17.04	44.98	X52	52,200	66,700	2,950	2,950	5,030
	0.250			17.04	44.98	X56	56,600	71,100	3,000	3,200	5,370
	0.250			17.04	44.98	X60	60,200	75,400	3,000	3,410	5,690
	0.250			17.04	44.98	X65	65,300	77,600	3,000	3,700	5,860
	0.250			17.04	44.98	X70	70,300	82,700	3,000	3,980	6,240
	0.250			17.04	44.98	X80	80,500	90,600	3,000	4,560	6,840
	0.280	40	STD	18.99	50.14	B	35,500	60,200	1,800	2,250	5,090
	0.280	40	STD	18.99	50.14	C	40,000	70,000	2,030		5,920
	0.280	40	STD	18.99	50.14	X42	42,100	60,200	2,670	2,670	5,090
	0.280	40	STD	18.99	50.14	X46	46,400	63,100	2,940	2,940	5,330
	0.280	40	STD	18.99	50.14	X52	52,200	66,700	3,000	3,310	5,640

1. Available in seamless only.

STANDARD PIPE & LINE PIPE TABLES

Outside Diameter NPS (inches)	Wall			Weight		Grade	Specified Minimum Strength (psi)		Mill Hydrostatic Test Pressure (psi)		Ultimate Burst (psi)
	Inches	Schedule Number	Class	lb/ft Plain End	Tons/ Mile		Yield	Tensile	Standard	Alternate	
OD 6.625											
NPS 6 OD 6.625 Seamless & ERW	0.280	40	STD	18.99	50.14	X56	56,600	71,100	3,000	3,590	6,010
	0.280	40	STD	18.99	50.14	X60	60,200	75,400	3,000	3,820	6,370
	0.280	40	STD	18.99	50.14	X65	65,300	77,600	3,000	4,140	6,560
	0.280	40	STD	18.99	50.14	X70	70,300	82,700	3,000	4,460	6,990
	0.280	40	STD	18.99	50.14	X80[1]	80,500	90,600	3,000	5,100	7,660
	0.312			21.06	55.59	B	35,500	60,200	2,010	2,510	5,670
	0.312			21.06	55.59	C	40,000	70,000	2,260		6,590
	0.312			21.06	55.59	X42	42,100	60,200	2,970	2,970	5,670
	0.312			21.06	55.59	X46	46,400	63,100	3,000	3,280	5,940
	0.312			21.06	55.59	X52	52,200	66,700	3,000	3,690	6,280
	0.312			21.06	55.59	X56	56,600	71,100	3,000	4,000	6,700
	0.312			21.06	55.59	X60	60,200	75,400	3,000	4,250	7,100
	0.312			21.06	55.59	X65	65,300	77,600	3,000	4,610	7,310
	0.312			21.06	55.59	X70	70,300	82,700	3,000	4,970	7,790
	0.312			21.06	55.59	X80[1]	80,500	90,600	3,000	5,690	8,530
	0.344			23.10	60.98	B	35,500	60,200	2,210	2,760	6,250
	0.344			23.10	60.98	C	40,000	70,000	2,490		7,270
	0.344			23.10	60.98	X42	42,100	60,200	3,000	3,280	6,250
	0.344			23.10	60.98	X46	46,400	63,100	3,000	3,610	6,550
	0.344			23.10	60.98	X52	52,200	66,700	3,000	4,070	6,930
	0.344			23.10	60.98	X56	56,600	71,100	3,000	4,410	7,380
	0.344			23.10	60.98	X60	60,200	75,400	3,000	4,690	7,830
	0.344			23.10	60.98	X65	65,300	77,600	3,000	5,090	8,060
	0.344			23.10	60.98	X70	70,300	82,700	3,000	5,480	8,590
	0.344			23.10	60.98	X80[1]	80,500	90,600	3,000	6,270	9,410
	0.375			25.05	66.14	B	35,500	60,200	2,410	2,800	6,820
	0.375			25.05	66.14	C	40,000	70,000	2,720		7,920
	0.375			25.05	66.14	X42	42,100	60,200	3,000	3,570	6,820
	0.375			25.05	66.14	X46	46,400	63,100	3,000	3,940	7,140
	0.375			25.05	66.14	X52	52,200	66,700	3,000	4,430	7,550
	0.375			25.05	66.14	X56	56,600	71,100	3,000	4,810	8,050
	0.375			25.05	66.14	X60	60,200	75,400	3,000	5,110	8,540
	0.375			25.05	66.14	X65	65,300	77,600	3,000	5,540	8,780
	0.375			25.05	66.14	X70	70,300	82,700	3,000	5,970	9,360
	0.375			25.05	66.14	X80[1]	80,500	90,600	3,000	6,830	10,260
	0.432	80	XS	28.60	75.50	B	35,500	60,200	2,800	2,800	7,850
	0.432	80	XS	28.60	75.50	C	40,000	70,000	2,800		9,130
	0.432	80	XS	28.60	75.50	X42	42,100	60,200	3,000	4,120	7,850
	0.432	80	XS	28.60	75.50	X46	46,400	63,100	3,000	4,540	8,230
	0.432	80	XS	28.60	75.50	X52	52,200	66,700	3,000	5,110	8,700
	0.432	80	XS	28.60	75.50	X56	56,600	71,100	3,000	5,540	9,270
	0.432	80	XS	28.60	75.50	X60	60,200	75,400	3,000	5,890	9,830

1. Available in seamless only.

NOTE: This table is meant to be an abbreviated reference tool for the most common sizes and grades offered by U. S. Steel Tubular Products. To download a PDF version of the performance data or a complete listing, visit www.usstubular.com/connections/sl.

Outside Diameter NPS (inches)	Wall			Weight		Grade	Specified Minimum Strength (psi)		Mill Hydrostatic Test Pressure (psi)		Ultimate Burst (psi)
	Inches	Schedule Number	Class	lb/ft Plain End	Tons/ Mile		Yield	Tensile	Standard	Alternate	
OD 6.625											
NPS 6 OD 6.625 Seamless & ERW	0.432	80	XS	28.60	75.50	X65	65,300	77,600	3,000	6,390	10,120
	0.432	80	XS	28.60	75.50	X70	70,300	82,700	3,000	6,880	10,790
	0.432	80	XS	28.60	75.50	X80	80,500	90,600	3,000	7,260	11,820
NPS 6 OD 6.625 Seamless	0.500			32.74	86.43	B	35,500	60,200	2,800	2,800	9,090
	0.500			32.74	86.43	C	40,000	70,000	2,800		10,570
	0.500			32.74	86.43	X42	42,100	60,200	3,000	4,770	9,090
	0.500			32.74	86.43	X46	46,400	63,100	3,000	5,250	9,520
	0.500			32.74	86.43	X52	52,200	66,700	3,000	5,910	10,070
	0.500			32.74	86.43	X56	56,600	71,100	3,000	6,410	10,730
	0.500			32.74	86.43	X60	60,200	75,400	3,000	6,820	11,380
	0.500			32.74	86.43	X65	65,300	77,600	3,000	7,260	11,710
	0.500			32.74	86.43	X70	70,300	82,700	3,000	7,260	12,480
	0.500			32.74	86.43	X80	80,500	90,600	3,000	7,260	13,680
	0.562	120		36.43	96.16	B	35,500	60,200	2,800	2,800	10,210
	0.562	120		36.43	96.16	C	40,000	70,000	2,800		11,880
	0.562	120		36.43	96.16	X42	42,100	60,200	3,000	5,360	10,210
	0.562	120		36.43	96.16	X46	46,400	63,100	3,000	5,900	10,710
	0.562	120		36.43	96.16	X52	52,200	66,700	3,000	6,640	11,320
	0.562	120		36.43	96.16	X56	56,600	71,100	3,000	7,200	12,060
	0.562	120		36.43	96.16	X60	60,200	75,400	3,000	7,260	12,790
	0.562	120		36.43	96.16	X65	65,300	77,600	3,000	7,260	13,170
	0.562	120		36.43	96.16	X70	70,300	82,700	3,000	7,260	14,030
	0.562	120		36.43	96.16	X80	80,500	90,600	3,000	7,260	15,370
	0.625			40.09	105.83	B	35,500	60,200	2,800	2,800	11,360
	0.625			40.09	105.83	C	40,000	70,000	2,800		13,210
	0.625			40.09	105.83	X42	42,100	60,200	3,000	5,960	11,360
	0.625			40.09	105.83	X46	46,400	63,100	3,000	6,570	11,910
	0.625			40.09	105.83	X52	52,200	66,700	3,000	7,260	12,580
	0.625			40.09	105.83	X56	56,600	71,100	3,000	7,260	13,420
	0.625			40.09	105.83	X60	60,200	75,400	3,000	7,260	14,230
	0.625			40.09	105.83	X65	65,300	77,600	3,000	7,260	14,640
	0.625			40.09	105.83	X70	70,300	82,700	3,000	7,260	15,600
	0.625			40.09	105.83	X80	80,500	90,600	3,000	7,260	17,090
	0.719	160		45.39	119.84	B	35,500	60,200	2,800	2,800	13,070
	0.719	160		45.39	119.84	C	40,000	70,000	2,800		15,190
	0.719	160		45.39	119.84	X42	42,100	60,200	3,000	6,850	13,070
	0.719	160		45.39	119.84	X46	46,400	63,100	3,000	7,260	13,700
	0.719	160		45.39	119.84	X52	52,200	66,700	3,000	7,260	14,480
	0.719	160		45.39	119.84	X56	56,600	71,100	3,000	7,260	15,430
	0.719	160		45.39	119.84	X60	60,200	75,400	3,000	7,260	16,370
	0.719	160		45.39	119.84	X65	65,300	77,600	3,000	7,260	16,840
	0.719	160		45.39	119.84	X70	70,300	82,700	3,000	7,260	17,950
	0.719	160		45.39	119.84	X80	80,500	90,600	3,000	7,260	19,670

STANDARD PIPE & LINE PIPE TABLES

Outside Diameter NPS (inches)	Wall			Weight		Grade	Specified Minimum Strength (psi)		Mill Hydrostatic Test Pressure (psi)		Ultimate Burst (psi)
	Inches	Schedule Number	Class	lb/ft Plain End	Tons/ Mile		Yield	Tensile	Standard	Alternate	
OD 8.625											
NPS 8 OD 8.625 ERW	0.188			16.96	44.76	B	35,500	60,200	930	1,160	2,620
	0.188			16.96	44.76	C	40,000	70,000	1,050		3,050
	0.188			16.96	44.76	X42	42,100	60,200	1,380	1,380	2,620
	0.188			16.96	44.76	X46	46,400	63,100	1,520	1,520	2,750
	0.188			16.96	44.76	X52	52,200	66,700	1,710	1,710	2,910
	0.188			16.96	44.76	X56	56,600	71,100	1,850	1,850	3,100
	0.188			16.96	44.76	X60	60,200	75,400	1,970	1,970	3,290
	0.188			16.96	44.76	X65	65,300	77,600	2,140	2,140	3,380
	0.188			16.96	44.76	X70	70,300	82,700	2,300	2,300	3,610
	0.203			18.28	48.25	B	35,500	60,200	1,000	1,250	2,830
	0.203			18.28	48.25	C	40,000	70,000	1,130		3,300
	0.203			18.28	48.25	X42	42,100	60,200	1,490	1,490	2,830
	0.203			18.28	48.25	X46	46,400	63,100	1,640	1,640	2,970
	0.203			18.28	48.25	X52	52,200	66,700	1,840	1,840	3,140
	0.203			18.28	48.25	X56	56,600	71,100	2,000	2,000	3,350
	0.203			18.28	48.25	X60	60,200	75,400	2,130	2,130	3,550
	0.203			18.28	48.25	X65	65,300	77,600	2,310	2,310	3,650
	0.203			18.28	48.25	X70	70,300	82,700	2,480	2,480	3,890
	0.219			19.68	51.95	B	35,500	60,200	1,080	1,350	3,060
	0.219			19.68	51.95	C	40,000	70,000	1,220		3,550
	0.219			19.68	51.95	X42	42,100	60,200	1,600	1,600	3,060
	0.219			19.68	51.95	X46	46,400	63,100	1,770	1,770	3,200
	0.219			19.68	51.95	X52	52,200	66,700	1,990	1,990	3,390
	0.219			19.68	51.95	X56	56,600	71,100	2,160	2,160	3,610
	0.219			19.68	51.95	X60	60,200	75,400	2,290	2,290	3,830
	0.219			19.68	51.95	X65	65,300	77,600	2,490	2,490	3,940
	0.219			19.68	51.95	X70	70,300	82,700	2,680	2,680	4,200
NPS 8 OD 8.625 Seamless & ERW	0.250	20		22.38	59.09	B	35,500	60,200	1,230	1,540	3,490
	0.250	20		22.38	59.09	C	40,000	70,000	1,390		4,060
	0.250	20		22.38	59.09	X42	42,100	60,200	1,830	1,830	3,490
	0.250	20		22.38	59.09	X46	46,400	63,100	2,020	2,020	3,660
	0.250	20		22.38	59.09	X52	52,200	66,700	2,270	2,270	3,870
	0.250	20		22.38	59.09	X56	56,600	71,100	2,460	2,460	4,120
	0.250	20		22.38	59.09	X60	60,200	75,400	2,620	2,620	4,370
	0.250	20		22.38	59.09	X65	65,300	77,600	2,840	2,840	4,500
	0.250	20		22.38	59.09	X70	70,300	82,700	3,000	3,060	4,790
	0.250	20		22.38	59.09	X80[1]	80,500	90,600	3,000	3,500	5,250
	0.277	30		24.72	65.26	B	35,500	60,200	1,370	1,710	3,870
	0.277	30		24.72	65.26	C	40,000	70,000	1,540		4,500
	0.277	30		24.72	65.26	X42	42,100	60,200	2,030	2,030	3,870
	0.277	30		24.72	65.26	X46	46,400	63,100	2,240	2,240	4,050
	0.277	30		24.72	65.26	X52	52,200	66,700	2,510	2,510	4,280
	0.277	30		24.72	65.26	X56	56,600	71,100	2,730	2,730	4,570
	0.277	30		24.72	65.26	X60	60,200	75,400	2,900	2,900	4,840

1. Available in seamless only.

NOTE: This table is meant to be an abbreviated reference tool for the most common sizes and grades offered by U. S. Steel Tubular Products. To download a PDF version of the performance data or a complete listing, visit www.usstubular.com/connections/sl.

Outside Diameter NPS (inches)	Wall			Weight		Grade	Specified Minimum Strength (psi)		Mill Hydrostatic Test Pressure (psi)		Ultimate Burst (psi)
	Inches	Schedule Number	Class	lb/ft Plain End	Tons/ Mile		Yield	Tensile	Standard	Alternate	
OD 8.625											
NPS 8 OD 8.625 Seamless & ERW	0.277	30		24.72	65.26	X65	65,300	77,600	3,000	3,150	4,980
	0.277	30		24.72	65.26	X70	70,300	82,700	3,000	3,390	5,310
	0.277	30		24.72	65.26	X80[1]	80,500	90,600	3,000	3,880	5,820
	0.312			27.73	73.20	B	35,500	60,200	1,540	1,930	4,360
	0.312			27.73	73.20	C	40,000	70,000	1,740		5,060
	0.312			27.73	73.20	X42	42,100	60,200	2,280	2,280	4,360
	0.312			27.73	73.20	X46	46,400	63,100	2,520	2,520	4,570
	0.312			27.73	73.20	X52	52,200	66,700	2,830	2,830	4,830
	0.312			27.73	73.20	X56	56,600	71,100	3,000	3,070	5,140
	0.312			27.73	73.20	X60	60,200	75,400	3,000	3,270	5,460
	0.312			27.73	73.20	X65	65,300	77,600	3,000	3,540	5,610
	0.312			27.73	73.20	X70	70,300	82,700	3,000	3,810	5,980
	0.312			27.73	73.20	X80[1]	80,500	90,600	3,000	4,370	6,550
	0.322	40	STD	28.58	75.45	B	35,500	60,200	1,590	1,990	4,490
	0.322	40	STD	28.58	75.45	C	40,000	70,000	1,790		5,230
	0.322	40	STD	28.58	75.45	X42	42,100	60,200	2,360	2,360	4,490
	0.322	40	STD	28.58	75.45	X46	46,400	63,100	2,600	2,600	4,710
	0.322	40	STD	28.58	75.45	X52	52,200	66,700	2,920	2,920	4,980
	0.322	40	STD	28.58	75.45	X56	56,600	71,100	3,000	3,170	5,310
	0.322	40	STD	28.58	75.45	X60	60,200	75,400	3,000	3,370	5,630
	0.322	40	STD	28.58	75.45	X65	65,300	77,600	3,000	3,660	5,790
	0.322	40	STD	28.58	75.45	X70	70,300	82,700	3,000	3,940	6,170
	0.322	40	STD	28.58	75.45	X80[1]	80,500	90,600	3,000	4,510	6,760
	0.344			30.45	80.39	B	35,500	60,200	1,700	2,120	4,800
	0.344			30.45	80.39	C	40,000	70,000	1,910		5,580
	0.344			30.45	80.39	X42	42,100	60,200	2,520	2,520	4,800
	0.344			30.45	80.39	X46	46,400	63,100	2,780	2,780	5,030
	0.344			30.45	80.39	X52	52,200	66,700	3,000	3,120	5,320
	0.344			30.45	80.39	X56	56,600	71,100	3,000	3,390	5,670
	0.344			30.45	80.39	X60	60,200	75,400	3,000	3,600	6,010
	0.344			30.45	80.39	X65	65,300	77,600	3,000	3,910	6,190
	0.344			30.45	80.39	X70	70,300	82,700	3,000	4,210	6,600
	0.344			30.45	80.39	X80[1]	80,500	90,600	3,000	4,820	7,230
	0.375			33.07	87.31	B	35,500	60,200	1,850	2,320	5,230
	0.375			33.07	87.31	C	40,000	70,000	2,090		6,090
	0.375			33.07	87.31	X42	42,100	60,200	2,750	2,750	5,230
	0.375			33.07	87.31	X46	46,400	63,100	3,000	3,030	5,490
	0.375			33.07	87.31	X52	52,200	66,700	3,000	3,400	5,800
	0.375			33.07	87.31	X56	56,600	71,100	3,000	3,690	6,180
	0.375			33.07	87.31	X60	60,200	75,400	3,000	3,930	6,560
	0.375			33.07	87.31	X65	65,300	77,600	3,000	4,260	6,750
	0.375			33.07	87.31	X70	70,300	82,700	3,000	4,580	7,190
	0.375			33.07	87.31	X80[1]	80,500	90,600	3,000	5,250	7,880

1. Available in seamless only.

STANDARD PIPE & LINE PIPE TABLES

Outside Diameter NPS (inches)	Wall			Weight		Grade	Specified Minimum Strength (psi)		Mill Hydrostatic Test Pressure (psi)		Ultimate Burst (psi)
	Inches	Schedule Number	Class	lb/ft Plain End	Tons/ Mile		Yield	Tensile	Standard	Alternate	
OD 8.625											
NPS 8 OD 8.625 Seamless & ERW	0.406	60		35.67	94.17	B	35,500	60,200	2,010	2,510	5,670
	0.406	60		35.67	94.17	C	40,000	70,000	2,260		6,590
	0.406	60		35.67	94.17	X42	42,100	60,200	2,970	2,970	5,670
	0.406	60		35.67	94.17	X46	46,400	63,100	3,000	3,280	5,940
	0.406	60		35.67	94.17	X52	52,200	66,700	3,000	3,690	6,280
	0.406	60		35.67	94.17	X56	56,600	71,100	3,000	4,000	6,690
	0.406	60		35.67	94.17	X60	60,200	75,400	3,000	4,250	7,100
	0.406	60		35.67	94.17	X65	65,300	77,600	3,000	4,610	7,310
	0.406	60		35.67	94.17	X70	70,300	82,700	3,000	4,960	7,790
	0.406	60		35.67	94.17	X80	80,500	90,600	3,000	5,680	8,530
	0.438			38.33	101.20	B	35,500	60,200	2,160	2,700	6,110
	0.438			38.33	101.20	C	40,000	70,000	2,440		7,110
	0.438			38.33	101.20	X42	42,100	60,200	3,000	3,210	6,110
	0.438			38.33	101.20	X46	46,400	63,100	3,000	3,530	6,410
	0.438			38.33	101.20	X52	52,200	66,700	3,000	3,980	6,770
	0.438			38.33	101.20	X56	56,600	71,100	3,000	4,310	7,220
	0.438			38.33	101.20	X60	60,200	75,400	3,000	4,590	7,660
	0.438			38.33	101.20	X65	65,300	77,600	3,000	4,970	7,880
	0.438			38.33	101.20	X70	70,300	82,700	3,000	5,360	8,400
	0.438			38.33	101.20	X80	80,500	90,600	3,000	6,130	9,200
	0.500	80	XS	43.43	114.65	B	35,500	60,200	2,470	2,800	6,980
	0.500	80	XS	43.43	114.65	C	40,000	70,000	2,800		8,120
	0.500	80	XS	43.43	114.65	X42	42,100	60,200	3,000	3,660	6,980
	0.500	80	XS	43.43	114.65	X46	46,400	63,100	3,000	4,030	7,320
	0.500	80	XS	43.43	114.65	X52	52,200	66,700	3,000	4,540	7,730
	0.500	80	XS	43.43	114.65	X56	56,600	71,100	3,000	4,920	8,240
	0.500	80	XS	43.43	114.65	X60	60,200	75,400	3,000	5,230	8,740
	0.500	80	XS	43.43	114.65	X65	65,300	77,600	3,000	5,680	9,000
	0.500	80	XS	43.43	114.65	X70	70,300	82,700	3,000	6,110	9,590
	0.500	80	XS	43.43	114.65	X80	80,500	90,600	3,000	7,000	10,500
NPS 8 OD 8.625 Seamless	0.562			48.44	127.88	B	35,500	60,200	2,800	2,800	7,850
	0.562			48.44	127.88	C	40,000	70,000	2,800		9,120
	0.562			48.44	127.88	X42	42,100	60,200	3,000	4,110	7,850
	0.562			48.44	127.88	X46	46,400	63,100	3,000	4,540	8,220
	0.562			48.44	127.88	X52	52,200	66,700	3,000	5,100	8,690
	0.562			48.44	127.88	X56	56,600	71,100	3,000	5,530	9,270
	0.562			48.44	127.88	X60	60,200	75,400	3,000	5,880	9,830
	0.562			48.44	127.88	X65	65,300	77,600	3,000	6,380	10,110
	0.562			48.44	127.88	X70	70,300	82,700	3,000	6,870	10,780
	0.562			48.44	127.88	X80	80,500	90,600	3,000	7,260	11,810
	0.594	100		51.00	134.63	B	35,500	60,200	2,800	2,800	8,290
	0.594	100		51.00	134.63	C	40,000	70,000	2,800		9,640
	0.594	100		51.00	134.63	X42	42,100	60,200	3,000	4,350	8,290
	0.594	100		51.00	134.63	X46	46,400	63,100	3,000	4,790	8,690

NOTE: This table is meant to be an abbreviated reference tool for the most common sizes and grades offered by U. S. Steel Tubular Products. To download a PDF version of the performance data or a complete listing, visit www.usstubular.com/connections/sl.

Outside Diameter NPS (inches)	Wall			Weight		Grade	Specified Minimum Strength (psi)		Mill Hydrostatic Test Pressure (psi)		Ultimate Burst (psi)
	Inches	Schedule Number	Class	lb/ft Plain End	Tons/ Mile		Yield	Tensile	Standard	Alternate	
OD 8.625											
NPS 8 OD 8.625 Seamless	0.594	100		51.00	134.63	X52	52,200	66,700	3,000	5,390	9,190
	0.594	100		51.00	134.63	X56	56,600	71,100	3,000	5,850	9,790
	0.594	100		51.00	134.63	X60	60,200	75,400	3,000	6,220	10,390
	0.594	100		51.00	134.63	X65	65,300	77,600	3,000	6,750	10,690
	0.594	100		51.00	134.63	X70	70,300	82,700	3,000	7,260	11,390
	0.594	100		51.00	134.63	X80	80,500	90,600	3,000	7,260	12,480
	0.625			53.45	141.11	B	35,500	60,200	2,800	2,800	8,720
	0.625			53.45	141.11	C	40,000	70,000	2,800		10,140
	0.625			53.45	141.11	X42	42,100	60,200	3,000	4,580	8,720
	0.625			53.45	141.11	X46	46,400	63,100	3,000	5,040	9,140
	0.625			53.45	141.11	X52	52,200	66,700	3,000	5,670	9,670
	0.625			53.45	141.11	X56	56,600	71,100	3,000	6,150	10,300
	0.625			53.45	141.11	X60	60,200	75,400	3,000	6,540	10,930
	0.625			53.45	141.11	X65	65,300	77,600	3,000	7,100	11,250
	0.625			53.45	141.11	X70	70,300	82,700	3,000	7,260	11,990
	0.625			53.45	141.11	X80	80,500	90,600	3,000	7,260	13,130
	0.719	120		60.77	160.42	B	35,500	60,200	2,800	2,800	10,040
	0.719	120		60.77	160.42	C	40,000	70,000	2,800		11,670
	0.719	120		60.77	160.42	X42	42,100	60,200	3,000	5,260	10,040
	0.719	120		60.77	160.42	X46	46,400	63,100	3,000	5,800	10,520
	0.719	120		60.77	160.42	X52	52,200	66,700	3,000	6,530	11,120
	0.719	120		60.77	160.42	X56	56,600	71,100	3,000	7,080	11,850
	0.719	120		60.77	160.42	X60	60,200	75,400	3,000	7,260	12,570
	0.719	120		60.77	160.42	X65	65,300	77,600	3,000	7,260	12,940
	0.719	120		60.77	160.42	X70	70,300	82,700	3,000	7,260	13,790
	0.719	120		60.77	160.42	X80	80,500	90,600	3,000	7,260	15,110
	0.812	140		67.82	179.04	B	35,500	60,200	2,800	2,800	11,340
	0.812	140		67.82	179.04	C	40,000	70,000	2,800		13,180
	0.812	140		67.82	179.04	X42	42,100	60,200	3,000	5,950	11,340
	0.812	140		67.82	179.04	X46	46,400	63,100	3,000	6,550	11,880
	0.812	140		67.82	179.04	X52	52,200	66,700	3,000	7,260	12,560
	0.812	140		67.82	179.04	X56	56,600	71,100	3,000	7,260	13,390
	0.812	140		67.82	179.04	X60	60,200	75,400	3,000	7,260	14,200
	0.812	140		67.82	179.04	X65	65,300	77,600	3,000	7,260	14,610
	0.812	140		67.82	179.04	X70	70,300	82,700	3,000	7,260	15,570
	0.812	140		67.82	179.04	X80	80,500	90,600	3,000	7,260	17,060
	0.875		XXS	72.49	191.38	B	35,500	60,200	2,800	2,800	12,210
	0.875		XXS	72.49	191.38	C	40,000	70,000	2,800		14,200
	0.875		XXS	72.49	191.38	X42	42,100	60,200	3,000	6,410	12,210
	0.875		XXS	72.49	191.38	X46	46,400	63,100	3,000	7,060	12,800
	0.875		XXS	72.49	191.38	X52	52,200	66,700	3,000	7,260	13,530
	0.875		XXS	72.49	191.38	X56	56,600	71,100	3,000	7,260	14,430
	0.875		XXS	72.49	191.38	X60	60,200	75,400	3,000	7,260	15,300
	0.875		XXS	72.49	191.38	X65	65,300	77,600	3,000	7,260	15,740

STANDARD PIPE & LINE PIPE TABLES

Outside Diameter NPS (inches)	Wall			Weight		Grade	Specified Minimum Strength (psi)		Mill Hydrostatic Test Pressure (psi)		Ultimate Burst (psi)
	Inches	Schedule Number	Class	lb/ft Plain End	Tons/ Mile		Yield	Tensile	Standard	Alternate	
OD 8.625											
NPS 8 OD 8.625 Seamless	0.875		XXS	72.49	191.38	X70	70,300	82,700	3,000	7,260	16,780
	0.875		XXS	72.49	191.38	X80	80,500	90,600	3,000	7,260	18,380
	0.906	160		74.76	197.37	B	35,500	60,200	2,800	2,800	12,650
	0.906	160		74.76	197.37	C	40,000	70,000	2,800		14,710
	0.906	160		74.76	197.37	X42	42,100	60,200	3,000	6,630	12,650
	0.906	160		74.76	197.37	X46	46,400	63,100	3,000	7,260	13,260
	0.906	160		74.76	197.37	X52	52,200	66,700	3,000	7,260	14,010
	0.906	160		74.76	197.37	X56	56,600	71,100	3,000	7,260	14,940
	0.906	160		74.76	197.37	X60	60,200	75,400	3,000	7,260	15,840
	0.906	160		74.76	197.37	X65	65,300	77,600	3,000	7,260	16,300
	0.906	160		74.76	197.37	X70	70,300	82,700	3,000	7,260	17,370
	0.906	160		74.76	197.37	X80	80,500	90,600	3,000	7,260	19,030
OD 10.750											
NPS 10 OD 10.750 ERW	0.188			21.23	56.04	B	35,500	60,200	750	930	2,110
	0.188			21.23	56.04	C	40,000	70,000	840		2,450
	0.188			21.23	56.04	X42	42,100	60,200	1,250	1,250	2,110
	0.188			21.23	56.04	X46	46,400	63,100	1,380	1,380	2,210
	0.188			21.23	56.04	X52	52,200	66,700	1,550	1,550	2,330
	0.188			21.23	56.04	X56	56,600	71,100	1,680	1,680	2,490
	0.188			21.23	56.04	X60	60,200	75,400	1,790	1,790	2,640
	0.188			21.23	56.04	X65	65,300	77,600	1,940	1,940	2,710
	0.188			21.23	56.04	X70	70,300	82,700	2,090	2,090	2,890
	0.203			22.89	60.42	B	35,500	60,200	800	1,010	2,270
	0.203			22.89	60.42	C	40,000	70,000	910		2,640
	0.203			22.89	60.42	X42	42,100	60,200	1,350	1,350	2,270
	0.203			22.89	60.42	X46	46,400	63,100	1,490	1,490	2,380
	0.203			22.89	60.42	X52	52,200	66,700	1,680	1,680	2,520
	0.203			22.89	60.42	X56	56,600	71,100	1,820	1,820	2,690
	0.203			22.89	60.42	X60	60,200	75,400	1,930	1,930	2,850
	0.203			22.89	60.42	X65	65,300	77,600	2,100	2,100	2,930
	0.203			22.89	60.42	X70	70,300	82,700	2,260	2,260	3,120
	0.219			24.65	65.09	B	35,500	60,200	870	1,080	2,450
	0.219			24.65	65.09	C	40,000	70,000	980		2,850
	0.219			24.65	65.09	X42	42,100	60,200	1,460	1,460	2,450
	0.219			24.65	65.09	X46	46,400	63,100	1,610	1,610	2,570
	0.219			24.65	65.09	X52	52,200	66,700	1,810	1,810	2,720
	0.219			24.65	65.09	X56	56,600	71,100	1,960	1,960	2,900
	0.219			24.65	65.09	X60	60,200	75,400	2,080	2,080	3,070
	0.219			24.65	65.09	X65	65,300	77,600	2,260	2,260	3,160
	0.219			24.65	65.09	X70	70,300	82,700	2,430	2,430	3,370
	0.250	20		28.06	74.08	B	35,500	60,200	990	1,240	2,800
	0.250	20		28.06	74.08	C	40,000	70,000	1,120		3,260
	0.250	20		28.06	74.08	X42	42,100	60,200	1,660	1,660	2,800
	0.250	20		28.06	74.08	X46	46,400	63,100	1,830	1,830	2,930

NOTE: This table is meant to be an abbreviated reference tool for the most common sizes and grades offered by U. S. Steel Tubular Products. To download a PDF version of the performance data or a complete listing, visit www.usstubular.com/connections/sl.

Outside Diameter NPS (inches)	Wall			Weight		Grade	Specified Minimum Strength (psi)		Mill Hydrostatic Test Pressure (psi)		Ultimate Burst (psi)
	Inches	Schedule Number	Class	lb/ft Plain End	Tons/ Mile		Yield	Tensile	Standard	Alternate	
OD 10.750											
NPS 10 OD 10.750 ERW	0.250	20		28.06	74.08	X52	52,200	66,700	2,060	2,060	3,100
	0.250	20		28.06	74.08	X56	56,600	71,100	2,240	2,240	3,310
	0.250	20		28.06	74.08	X60	60,200	75,400	2,380	2,380	3,510
	0.250	20		28.06	74.08	X65	65,300	77,600	2,580	2,580	3,610
	0.250	20		28.06	74.08	X70	70,300	82,700	2,780	2,780	3,850
	0.279			31.23	82.45	B	35,500	60,200	1,110	1,380	3,120
	0.279			31.23	82.45	C	40,000	70,000	1,250		3,630
	0.279			31.23	82.45	X42	42,100	60,200	1,860	1,860	3,120
	0.279			31.23	82.45	X46	46,400	63,100	2,050	2,050	3,280
	0.279			31.23	82.45	X52	52,200	66,700	2,300	2,300	3,460
	0.279			31.23	82.45	X56	56,600	71,100	2,500	2,500	3,690
	0.279			31.23	82.45	X60	60,200	75,400	2,660	2,660	3,910
	0.279			31.23	82.45	X65	65,300	77,600	2,880	2,880	4,030
	0.279			31.23	82.45	X70	70,300	82,700	3,000	3,100	4,290
	0.307	30		34.27	90.48	B	35,500	60,200	1,220	1,520	3,440
	0.307	30		34.27	90.48	C	40,000	70,000	1,370		4,000
	0.307	30		34.27	90.48	X42	42,100	60,200	2,040	2,040	3,440
	0.307	30		34.27	90.48	X46	46,400	63,100	2,250	2,250	3,600
	0.307	30		34.27	90.48	X52	52,200	66,700	2,530	2,530	3,810
	0.307	30		34.27	90.48	X56	56,600	71,100	2,750	2,750	4,060
	0.307	30		34.27	90.48	X60	60,200	75,400	2,920	2,920	4,310
	0.307	30		34.27	90.48	X65	65,300	77,600	3,000	3,170	4,430
	0.307	30		34.27	90.48	X70	70,300	82,700	3,000	3,410	4,720
	0.344			38.27	101.02	B	35,500	60,200	1,360	1,700	3,850
	0.344			38.27	101.02	C	40,000	70,000	1,540		4,480
	0.344			38.27	101.02	X42	42,100	60,200	2,290	2,290	3,850
	0.344			38.27	101.02	X46	46,400	63,100	2,520	2,520	4,040
	0.344			38.27	101.02	X52	52,200	66,700	2,840	2,840	4,270
	0.344			38.27	101.02	X56	56,600	71,100	3,000	3,080	4,550
	0.344			38.27	101.02	X60	60,200	75,400	3,000	3,270	4,830
	0.344			38.27	101.02	X65	65,300	77,600	3,000	3,550	4,970
	0.344			38.27	101.02	X70	70,300	82,700	3,000	3,820	5,290
NPS 10 OD 10.750 Seamless & ERW	0.365	40	STD	40.52	106.97	B	35,500	60,200	1,450	1,810	4,090
	0.365	40	STD	40.52	106.97	C	40,000	70,000	1,630		4,750
	0.365	40	STD	40.52	106.97	X42	42,100	60,200	2,430	2,430	4,090
	0.365	40	STD	40.52	106.97	X46	46,400	63,100	2,680	2,680	4,280
	0.365	40	STD	40.52	106.97	X52	52,200	66,700	3,000	3,010	4,530
	0.365	40	STD	40.52	106.97	X56	56,600	71,100	3,000	3,270	4,830
	0.365	40	STD	40.52	106.97	X60	60,200	75,400	3,000	3,470	5,120
	0.365	40	STD	40.52	106.97	X65	65,300	77,600	3,000	3,770	5,270
	0.365	40	STD	40.52	106.97	X70	70,300	82,700	3,000	4,060	5,620
	0.365	40	STD	40.52	106.97	X80[1]	80,500	90,600	3,000	4,650	6,150

1. Available in seamless only.

STANDARD PIPE & LINE PIPE TABLES

Outside Diameter NPS (inches)	Wall			Weight		Grade	Specified Minimum Strength (psi)		Mill Hydrostatic Test Pressure (psi)		Ultimate Burst (psi)
	Inches	Schedule Number	Class	lb/ft Plain End	Tons/ Mile		Yield	Tensile	Standard	Alternate	
OD 10.750											
NPS 10 OD 10.750 Seamless & ERW	0.438			48.28	127.47	B	35,500	60,200	1,740	2,170	4,910
	0.438			48.28	127.47	C	40,000	70,000	1,960		5,700
	0.438			48.28	127.47	X42	42,100	60,200	2,920	2,920	4,910
	0.438			48.28	127.47	X46	46,400	63,100	3,000	3,210	5,140
	0.438			48.28	127.47	X52	52,200	66,700	3,000	3,620	5,440
	0.438			48.28	127.47	X56	56,600	71,100	3,000	3,920	5,790
	0.438			48.28	127.47	X60	60,200	75,400	3,000	4,170	6,140
	0.438			48.28	127.47	X65	65,300	77,600	3,000	4,520	6,320
	0.438			48.28	127.47	X70	70,300	82,700	3,000	4,870	6,740
	0.438			48.28	127.47	X80	80,500	90,600	3,000	5,580	7,380
	0.500	60	XS	54.79	144.64	B	35,500	60,200	1,980	2,480	5,600
	0.500	60	XS	54.79	144.64	C	40,000	70,000	2,230		6,510
	0.500	60	XS	54.79	144.64	X42	42,100	60,200	3,000	3,330	5,600
	0.500	60	XS	54.79	144.64	X46	46,400	63,100	3,000	3,670	5,870
	0.500	60	XS	54.79	144.64	X52	52,200	66,700	3,000	4,130	6,200
	0.500	60	XS	54.79	144.64	X56	56,600	71,100	3,000	4,480	6,610
	0.500	60	XS	54.79	144.64	X60	60,200	75,400	3,000	4,760	7,010
	0.500	60	XS	54.79	144.64	X65	65,300	77,600	3,000	5,160	7,220
	0.500	60	XS	54.79	144.64	X70	70,300	82,700	3,000	5,560	7,690
	0.500	60	XS	54.79	144.64	X80	80,500	90,600	3,000	6,370	8,430
	0.562			61.21	161.59	B	35,500	60,200	2,230	2,800	6,290
	0.562			61.21	161.59	C	40,000	70,000	2,510		7,320
	0.562			61.21	161.59	X42	42,100	60,200	3,000	3,740	6,290
	0.562			61.21	161.59	X46	46,400	63,100	3,000	4,120	6,600
	0.562			61.21	161.59	X52	52,200	66,700	3,000	4,640	6,970
	0.562			61.21	161.59	X56	56,600	71,100	3,000	5,030	7,430
	0.562			61.21	161.59	X60	60,200	75,400	3,000	5,350	7,880
	0.562			61.21	161.59	X65	65,300	77,600	3,000	5,800	8,110
	0.562			61.21	161.59	X70	70,300	82,700	3,000	6,250	8,650
	0.562			61.21	161.59	X80[1]	80,500	90,600	3,000	7,150	9,470
	0.594	80		64.49	170.25	B	35,500	60,200	2,350	2,800	6,650
	0.594	80		64.49	170.25	C	40,000	70,000	2,650		7,740
	0.594	80		64.49	170.25	X42	42,100	60,200	3,000	3,950	6,650
	0.594	80		64.49	170.25	X46	46,400	63,100	3,000	4,360	6,970
	0.594	80		64.49	170.25	X52	52,200	66,700	3,000	4,900	7,370
	0.594	80		64.49	170.25	X56	56,600	71,100	3,000	5,320	7,860
	0.594	80		64.49	170.25	X60	60,200	75,400	3,000	5,650	8,330
	0.594	80		64.49	170.25	X65	65,300	77,600	3,000	6,130	8,580
	0.594	80		64.49	170.25	X70	70,300	82,700	3,000	6,600	9,140
	0.594	80		64.49	170.25	X80[1]	80,500	90,600	3,000	7,260	10,010
	0.625			67.65	178.59	B	35,500	60,200	2,480	2,800	7,000
	0.625			67.65	178.59	C	40,000	70,000	2,800		8,140
	0.625			67.65	178.59	X42	42,100	60,200	3,000	4,160	7,000
	0.625			67.65	178.59	X46	46,400	63,100	3,000	4,590	7,340

1. Available in seamless only.

NOTE: This table is meant to be an abbreviated reference tool for the most common sizes and grades offered by U. S. Steel Tubular Products. To download a PDF version of the performance data or a complete listing, visit www.usstubular.com/connections/sl.

Outside Diameter NPS (inches)	Wall			Weight		Grade	Specified Minimum Strength (psi)		Mill Hydrostatic Test Pressure (psi)		Ultimate Burst (psi)
	Inches	Schedule Number	Class	lb/ft Plain End	Tons/ Mile		Yield	Tensile	Standard	Alternate	
OD 10.750											
NPS 10 OD 10.750 Seamless	0.625			67.65	178.59	X52	52,200	66,700	3,000	5,160	7,760
	0.625			67.65	178.59	X56	56,600	71,100	3,000	5,590	8,270
	0.625			67.65	178.59	X60	60,200	75,400	3,000	5,950	8,770
	0.625			67.65	178.59	X65	65,300	77,600	3,000	6,450	9,020
	0.625			67.65	178.59	X70	70,300	82,700	3,000	6,950	9,620
	0.625			67.65	178.59	X80	80,500	90,600	3,000	7,260	10,530
	0.719	100		77.10	203.54	B	35,500	60,200	2,800	2,800	8,050
	0.719	100		77.10	203.54	C	40,000	70,000	2,800		9,360
	0.719	100		77.10	203.54	X42	42,100	60,200	3,000	4,790	8,050
	0.719	100		77.10	203.54	X46	46,400	63,100	3,000	5,280	8,440
	0.719	100		77.10	203.54	X52	52,200	66,700	3,000	5,940	8,920
	0.719	100		77.10	203.54	X56	56,600	71,100	3,000	6,440	9,510
	0.719	100		77.10	203.54	X60	60,200	75,400	3,000	6,840	10,090
	0.719	100		77.10	203.54	X65	65,300	77,600	3,000	7,260	10,380
	0.719	100		77.10	203.54	X70	70,300	82,700	3,000	7,260	11,060
	0.719	100		77.10	203.54	X80	80,500	90,600	3,000	7,260	12,120
	0.812			86.26	227.74	B	35,500	60,200	2,800	2,800	9,090
	0.812			86.26	227.74	C	40,000	70,000	2,800		10,570
	0.812			86.26	227.74	X42	42,100	60,200	3,000	5,410	9,090
	0.812			86.26	227.74	X46	46,400	63,100	3,000	5,960	9,530
	0.812			86.26	227.74	X52	52,200	66,700	3,000	6,700	10,080
	0.812			86.26	227.74	X56	56,600	71,100	3,000	7,260	10,740
	0.812			86.26	227.74	X60	60,200	75,400	3,000	7,260	11,390
	0.812			86.26	227.74	X65	65,300	77,600	3,000	7,260	11,720
	0.812			86.26	227.74	X70	70,300	82,700	3,000	7,260	12,490
	0.812			86.26	227.74	X80	80,500	90,600	3,000	7,260	13,690
	0.844	120		89.38	235.95	B	35,500	60,200	2,800	2,800	9,450
	0.844	120		89.38	235.95	C	40,000	70,000	2,800		10,990
	0.844	120		89.38	235.95	X42	42,100	60,200	3,000	5,620	9,450
	0.844	120		89.38	235.95	X46	46,400	63,100	3,000	6,190	9,910
	0.844	120		89.38	235.95	X52	52,200	66,700	3,000	6,970	10,470
	0.844	120		89.38	235.95	X56	56,600	71,100	3,000	7,260	11,160
	0.844	120		89.38	235.95	X60	60,200	75,400	3,000	7,260	11,840
	0.844	120		89.38	235.95	X65	65,300	77,600	3,000	7,260	12,190
	0.844	120		89.38	235.95	X70	70,300	82,700	3,000	7,260	12,990
	0.844	120		89.38	235.95	X80	80,500	90,600	3,000	7,260	14,230
	1.000	140	XXS	104.23	275.16	B	35,500	60,200	2,800	2,800	11,200
	1.000	140	XXS	104.23	275.16	C	40,000	70,000	2,800		13,020
	1.000	140	XXS	104.23	275.16	X42	42,100	60,200	3,000	6,660	11,200
	1.000	140	XXS	104.23	275.16	X46	46,400	63,100	3,000	7,260	11,740
	1.000	140	XXS	104.23	275.16	X52	52,200	66,700	3,000	7,260	12,410
	1.000	140	XXS	104.23	275.16	X56	56,600	71,100	3,000	7,260	13,230
	1.000	140	XXS	104.23	275.16	X60	60,200	75,400	3,000	7,260	14,030
	1.000	140	XXS	104.23	275.16	X65	65,300	77,600	3,000	7,260	14,440

STANDARD PIPE & LINE PIPE TABLES

Outside Diameter NPS (inches)	Wall			Weight		Grade	Specified Minimum Strength (psi)		Mill Hydrostatic Test Pressure (psi)		Ultimate Burst (psi)
	Inches	Schedule Number	Class	lb/ft Plain End	Tons/ Mile		Yield	Tensile	Standard	Alternate	
OD 10.750											
NPS 10 OD 10.750 Seamless	1.000	140	XXS	104.23	275.16	X70	70,300	82,700	3,000	7,260	15,390
	1.000	140	XXS	104.23	275.16	X80	80,500	90,600	3,000	7,260	16,860
	1.125	160		115.75	305.59	B	35,500	60,200	2,800	2,800	12,600
	1.125	160		115.75	305.59	C	40,000	70,000	2,800		14,650
	1.125	160		115.75	305.59	X42	42,100	60,200	3,000	7,260	12,600
	1.125	160		115.75	305.59	X46	46,400	63,100	3,000	7,260	13,210
	1.125	160		115.75	305.59	X52	52,200	66,700	3,000	7,260	13,960
	1.125	160		115.75	305.59	X56	56,600	71,100	3,000	7,260	14,880
	1.125	160		115.75	305.59	X60	60,200	75,400	3,000	7,260	15,780
	1.125	160		115.75	305.59	X65	65,300	77,600	3,000	7,260	16,240
	1.125	160		115.75	305.59	X70	70,300	82,700	3,000	7,260	17,310
	1.125	160		115.75	305.59	X80	80,500	90,600	3,000	7,260	18,960
OD 12.750											
NPS 12 OD 12.750 ERW	0.188			25.25	66.65	B	35,500	60,200	630	790	1,780
	0.188			25.25	66.65	C	40,000	70,000	710		2,060
	0.188			25.25	66.65	X42	42,100	60,200	1,060	1,060	1,780
	0.188			25.25	66.65	X46	46,400	63,100	1,160	1,160	1,860
	0.188			25.25	66.65	X52	52,200	66,700	1,310	1,310	1,970
	0.188			25.25	66.65	X56	56,600	71,100	1,420	1,420	2,100
	0.188			25.25	66.65	X60	60,200	75,400	1,510	1,510	2,220
	0.188			25.25	66.65	X65	65,300	77,600	1,640	1,640	2,290
	0.188			25.25	66.65	X70	70,300	82,700	1,760	1,760	2,440
	0.203			27.23	71.88	B	35,500	60,200	680	850	1,920
	0.203			27.23	71.88	C	40,000	70,000	760		2,230
	0.203			27.23	71.88	X42	42,100	60,200	1,140	1,140	1,920
	0.203			27.23	71.88	X46	46,400	63,100	1,260	1,260	2,010
	0.203			27.23	71.88	X52	52,200	66,700	1,410	1,410	2,120
	0.203			27.23	71.88	X56	56,600	71,100	1,530	1,530	2,260
	0.203			27.23	71.88	X60	60,200	75,400	1,630	1,630	2,400
	0.203			27.23	71.88	X65	65,300	77,600	1,770	1,770	2,470
	0.203			27.23	71.88	X70	70,300	82,700	1,900	1,900	2,630
	0.219			29.34	77.45	B	35,500	60,200	730	910	2,070
	0.219			29.34	77.45	C	40,000	70,000	820		2,400
	0.219			29.34	77.45	X42	42,100	60,200	1,230	1,230	2,070
	0.219			29.34	77.45	X46	46,400	63,100	1,350	1,350	2,170
	0.219			29.34	77.45	X52	52,200	66,700	1,520	1,520	2,290
	0.219			29.34	77.45	X56	56,600	71,100	1,650	1,650	2,440
	0.219			29.34	77.45	X60	60,200	75,400	1,760	1,760	2,590
	0.219			29.34	77.45	X65	65,300	77,600	1,910	1,910	2,670
	0.219			29.34	77.45	X70	70,300	82,700	2,050	2,050	2,840
	0.219			29.34	77.45	X80[1]	80,500	90,600	2,350	2,350	3,110
	0.250	20		33.41	88.19	B	35,500	60,200	840	1,040	2,360
	0.250	20		33.41	88.19	C	40,000	70,000	940		2,750
	0.250	20		33.41	88.19	X42	42,100	60,200	1,400	1,400	2,360

1. Available in seamless only.

NOTE: This table is meant to be an abbreviated reference tool for the most common sizes and grades offered by U. S. Steel Tubular Products. To download a PDF version of the performance data or a complete listing, visit www.usstubular.com/connections/sl.

Outside Diameter NPS (inches)	Wall			Weight		Grade	Specified Minimum Strength (psi)		Mill Hydrostatic Test Pressure (psi)		Ultimate Burst (psi)
	Inches	Schedule Number	Class	lb/ft Plain End	Tons/ Mile		Yield	Tensile	Standard	Alternate	
OD 12.750											
NPS 12 OD 12.750 ERW	0.250	20		33.41	88.19	X46	46,400	63,100	1,550	1,550	2,470
	0.250	20		33.41	88.19	X52	52,200	66,700	1,740	1,740	2,620
	0.250	20		33.41	88.19	X56	56,600	71,100	1,890	1,890	2,790
	0.250	20		33.41	88.19	X60	60,200	75,400	2,010	2,010	2,960
	0.250	20		33.41	88.19	X65	65,300	77,600	2,180	2,180	3,040
	0.250	20		33.41	88.19	X70	70,300	82,700	2,340	2,340	3,240
	0.250	20		33.41	88.19	X80[1]	80,500	90,600	2,680	2,680	3,550
	0.281			37.46	98.88	B	35,500	60,200	940	1,170	2,650
	0.281			37.46	98.88	C	40,000	70,000	1,060		3,090
	0.281			37.46	98.88	X42	42,100	60,200	1,580	1,580	2,650
	0.281			37.46	98.88	X46	46,400	63,100	1,740	1,740	2,780
	0.281			37.46	98.88	X52	52,200	66,700	1,960	1,960	2,940
	0.281			37.46	98.88	X56	56,600	71,100	2,120	2,120	3,130
	0.281			37.46	98.88	X60	60,200	75,400	2,260	2,260	3,320
	0.281			37.46	98.88	X65	65,300	77,600	2,450	2,450	3,420
	0.281			37.46	98.88	X70	70,300	82,700	2,630	2,630	3,650
	0.281			37.46	98.88	X80[1]	80,500	90,600	3,000	3,020	3,990
	0.312			41.48	109.52	B	35,500	60,200	1,040	1,300	2,950
	0.312			41.48	109.52	C	40,000	70,000	1,170		3,430
	0.312			41.48	109.52	X42	42,100	60,200	1,750	1,750	2,950
	0.312			41.48	109.52	X46	46,400	63,100	1,930	1,930	3,090
	0.312			41.48	109.52	X52	52,200	66,700	2,170	2,170	3,260
	0.312			41.48	109.52	X56	56,600	71,100	2,350	2,350	3,480
	0.312			41.48	109.52	X60	60,200	75,400	2,500	2,500	3,690
	0.312			41.48	109.52	X65	65,300	77,600	2,720	2,720	3,800
	0.312			41.48	109.52	X70	70,300	82,700	2,920	2,920	4,050
	0.312			41.48	109.52	X80[1]	80,500	90,600	3,000	3,350	4,430
	0.330	30		43.81	115.67	B	35,500	60,200	1,100	1,380	3,120
	0.330	30		43.81	115.67	C	40,000	70,000	1,240		3,620
	0.330	30		43.81	115.67	X42	42,100	60,200	1,850	1,850	3,120
	0.330	30		43.81	115.67	X46	46,400	63,100	2,040	2,040	3,270
	0.330	30		43.81	115.67	X52	52,200	66,700	2,300	2,300	3,450
	0.330	30		43.81	115.67	X56	56,600	71,100	2,490	2,490	3,680
	0.330	30		43.81	115.67	X60	60,200	75,400	2,650	2,650	3,900
	0.330	30		43.81	115.67	X65	65,300	77,600	2,870	2,870	4,020
	0.330	30		43.81	115.67	X70	70,300	82,700	3,000	3,090	4,280
	0.330	30		43.81	115.67	X80[1]	80,500	90,600	3,000	3,540	4,690
	0.344			45.62	120.44	B	35,500	60,200	1,150	1,440	3,250
	0.344			45.62	120.44	C	40,000	70,000	1,300		3,780
	0.344			45.62	120.44	X42	42,100	60,200	1,930	1,930	3,250
	0.344			45.62	120.44	X46	46,400	63,100	2,130	2,130	3,400
	0.344			45.62	120.44	X52	52,200	66,700	2,390	2,390	3,600
	0.344			45.62	120.44	X56	56,600	71,100	2,600	2,600	3,840
	0.344			45.62	120.44	X60	60,200	75,400	2,760	2,760	4,070

1. Available in seamless only.

STANDARD PIPE & LINE PIPE TABLES

Outside Diameter NPS (inches)	Wall			Weight		Grade	Specified Minimum Strength (psi)		Mill Hydrostatic Test Pressure (psi)		Ultimate Burst (psi)
	Inches	Schedule Number	Class	lb/ft Plain End	Tons/ Mile		Yield	Tensile	Standard	Alternate	
OD 12.750											
NPS 12 OD 12.750 ERW	0.344			45.62	120.44	X65	65,300	77,600	3,000	3,000	4,190
	0.344			45.62	120.44	X70	70,300	82,700	3,000	3,220	4,460
	0.344			45.62	120.44	X80[1]	80,500	90,600	3,000	3,690	4,890
NPS 12 OD 12.750 Seamless & ERW	0.375		STD	49.61	130.97	B	35,500	60,200	1,250	1,570	3,540
	0.375		STD	49.61	130.97	C	40,000	70,000	1,410		4,120
	0.375		STD	49.61	130.97	X42	42,100	60,200	2,110	2,110	3,540
	0.375		STD	49.61	130.97	X46	46,400	63,100	2,320	2,320	3,710
	0.375		STD	49.61	130.97	X52	52,200	66,700	2,610	2,610	3,920
	0.375		STD	49.61	130.97	X56	56,600	71,100	2,830	2,830	4,180
	0.375		STD	49.61	130.97	X60	60,200	75,400	3,000	3,010	4,440
	0.375		STD	49.61	130.97	X65	65,300	77,600	3,000	3,270	4,560
	0.375		STD	49.61	130.97	X70	70,300	82,700	3,000	3,520	4,860
	0.375		STD	49.61	130.97	X80[1]	80,500	90,600	3,000	4,030	5,330
	0.406	40		53.57	141.44	B	35,500	60,200	1,360	1,700	3,830
	0.406	40		53.57	141.44	C	40,000	70,000	1,530		4,460
	0.406	40		53.57	141.44	X42	42,100	60,200	2,280	2,280	3,830
	0.406	40		53.57	141.44	X46	46,400	63,100	2,510	2,510	4,020
	0.406	40		53.57	141.44	X52	52,200	66,700	2,830	2,830	4,250
	0.406	40		53.57	141.44	X56	56,600	71,100	3,000	3,060	4,530
	0.406	40		53.57	141.44	X60	60,200	75,400	3,000	3,260	4,800
	0.406	40		53.57	141.44	X65	65,300	77,600	3,000	3,530	4,940
	0.406	40		53.57	141.44	X70	70,300	82,700	3,000	3,810	5,270
	0.406	40		53.57	141.44	X80	80,500	90,600	3,000	4,360	5,770
	0.438			57.65	152.19	B	35,500	60,200	1,460	1,830	4,140
	0.438			57.65	152.19	C	40,000	70,000	1,650		4,810
	0.438			57.65	152.19	X42	42,100	60,200	2,460	2,460	4,140
	0.438			57.65	152.19	X46	46,400	63,100	2,710	2,710	4,340
	0.438			57.65	152.19	X52	52,200	66,700	3,000	3,050	4,580
	0.438			57.65	152.19	X56	56,600	71,100	3,000	3,310	4,880
	0.438			57.65	152.19	X60	60,200	75,400	3,000	3,520	5,180
	0.438			57.65	152.19	X65	65,300	77,600	3,000	3,810	5,330
	0.438			57.65	152.19	X70	70,300	82,700	3,000	4,110	5,680
	0.438			57.65	152.19	X80	80,500	90,600	3,000	4,700	6,220
	0.500		XS	65.48	172.86	B	35,500	60,200	1,670	2,090	4,720
	0.500		XS	65.48	172.86	C	40,000	70,000	1,880		5,490
	0.500		XS	65.48	172.86	X42	42,100	60,200	2,810	2,810	4,720
	0.500		XS	65.48	172.86	X46	46,400	63,100	3,000	3,090	4,950
	0.500		XS	65.48	172.86	X52	52,200	66,700	3,000	3,480	5,230
	0.500		XS	65.48	172.86	X56	56,600	71,100	3,000	3,770	5,580
	0.500		XS	65.48	172.86	X60	60,200	75,400	3,000	4,010	5,910
	0.500		XS	65.48	172.86	X65	65,300	77,600	3,000	4,350	6,090
	0.500		XS	65.48	172.86	X70	70,300	82,700	3,000	4,690	6,490
	0.500		XS	65.48	172.86	X80	80,500	90,600	3,000	5,370	7,110
	0.562	60		73.22	193.31	B	35,500	60,200	1,880	2,350	5,310

1. Available in seamless only.

NOTE: This table is meant to be an abbreviated reference tool for the most common sizes and grades offered by U. S. Steel Tubular Products. To download a PDF version of the performance data or a complete listing, visit www.usstubular.com/connections/sl.

Outside Diameter NPS (inches)	Wall			Weight		Grade	Specified Minimum Strength (psi)		Mill Hydrostatic Test Pressure (psi)		Ultimate Burst (psi)
	Inches	Schedule Number	Class	lb/ft Plain End	Tons/ Mile		Yield	Tensile	Standard	Alternate	
OD 12.750											
NPS 12 OD 12.750 Seamless & ERW	0.562	60		73.22	193.31	C	40,000	70,000	2,120		6,170
	0.562	60		73.22	193.31	X42	42,100	60,200	3,000	3,150	5,310
	0.562	60		73.22	193.31	X46	46,400	63,100	3,000	3,480	5,560
	0.562	60		73.22	193.31	X52	52,200	66,700	3,000	3,910	5,880
	0.562	60		73.22	193.31	X56	56,600	71,100	3,000	4,240	6,270
	0.562	60		73.22	193.31	X60	60,200	75,400	3,000	4,510	6,650
	0.562	60		73.22	193.31	X65	65,300	77,600	3,000	4,890	6,840
	0.562	60		73.22	193.31	X70	70,300	82,700	3,000	5,270	7,290
	0.562	60		73.22	193.31	X80[1]	80,500	90,600	3,000	6,030	7,990
NPS 12 OD 12.750 Seamless	0.625			81.01	213.87	B	35,500	60,200	2,090	2,610	5,900
	0.625			81.01	213.87	C	40,000	70,000	2,350		6,860
	0.625			81.01	213.87	X42	42,100	60,200	3,000	3,510	5,900
	0.625			81.01	213.87	X46	46,400	63,100	3,000	3,870	6,190
	0.625			81.01	213.87	X52	52,200	66,700	3,000	4,350	6,540
	0.625			81.01	213.87	X56	56,600	71,100	3,000	4,720	6,970
	0.625			81.01	213.87	X60	60,200	75,400	3,000	5,020	7,390
	0.625			81.01	213.87	X65	65,300	77,600	3,000	5,440	7,610
	0.625			81.01	213.87	X70	70,300	82,700	3,000	5,860	8,110
	0.625			81.01	213.87	X80	80,500	90,600	3,000	6,710	8,880
	0.688	80		88.71	234.20	B	35,500	60,200	2,300	2,800	6,500
	0.688	80		88.71	234.20	C	40,000	70,000	2,590		7,550
	0.688	80		88.71	234.20	X42	42,100	60,200	3,000	3,860	6,500
	0.688	80		88.71	234.20	X46	46,400	63,100	3,000	4,260	6,810
	0.688	80		88.71	234.20	X52	52,200	66,700	3,000	4,790	7,200
	0.688	80		88.71	234.20	X56	56,600	71,100	3,000	5,190	7,670
	0.688	80		88.71	234.20	X60	60,200	75,400	3,000	5,520	8,140
	0.688	80		88.71	234.20	X65	65,300	77,600	3,000	5,990	8,370
	0.688	80		88.71	234.20	X70	70,300	82,700	3,000	6,450	8,930
	0.688	80		88.71	234.20	X80	80,500	90,600	3,000	7,260	9,780
	0.750			96.21	253.99	B	35,500	60,200	2,510	2,800	7,080
	0.750			96.21	253.99	C	40,000	70,000	2,800		8,240
	0.750			96.21	253.99	X42	42,100	60,200	3,000	4,210	7,080
	0.750			96.21	253.99	X46	46,400	63,100	3,000	4,640	7,420
	0.750			96.21	253.99	X52	52,200	66,700	3,000	5,220	7,850
	0.750			96.21	253.99	X56	56,600	71,100	3,000	5,660	8,360
	0.750			96.21	253.99	X60	60,200	75,400	3,000	6,020	8,870
	0.750			96.21	253.99	X65	65,300	77,600	3,000	6,530	9,130
	0.750			96.21	253.99	X70	70,300	82,700	3,000	7,030	9,730
	0.750			96.21	253.99	X80	80,500	90,600	3,000	7,260	10,660
	0.844	100		107.42	283.59	B	35,500	60,200	2,800	2,800	7,970
	0.844	100		107.42	283.59	C	40,000	70,000	2,800		9,270
	0.844	100		107.42	283.59	X42	42,100	60,200	3,000	4,740	7,970
	0.844	100		107.42	283.59	X46	46,400	63,100	3,000	5,220	8,350
	0.844	100		107.42	283.59	X52	52,200	66,700	3,000	5,870	8,830

1. Available in seamless only.

STANDARD PIPE & LINE PIPE TABLES

Outside Diameter NPS (inches)	Wall			Weight		Grade	Specified Minimum Strength (psi)		Mill Hydrostatic Test Pressure (psi)		Ultimate Burst (psi)
	Inches	Schedule Number	Class	lb/ft Plain End	Tons/ Mile		Yield	Tensile	Standard	Alternate	
OD 12.750											
NPS 12 OD 12.750 Seamless	0.844	100		107.42	283.59	X56	56,600	71,100	3,000	6,370	9,410
	0.844	100		107.42	283.59	X60	60,200	75,400	3,000	6,770	9,980
	0.844	100		107.42	283.59	X65	65,300	77,600	3,000	7,260	10,270
	0.844	100		107.42	283.59	X70	70,300	82,700	3,000	7,260	10,950
	0.844	100		107.42	283.59	X80	80,500	90,600	3,000	7,260	11,990
	1.000	120	XXS	125.61	331.60	B	35,500	60,200	2,800	2,800	9,440
	1.000	120	XXS	125.61	331.60	C	40,000	70,000	2,800		10,980
	1.000	120	XXS	125.61	331.60	X42	42,100	60,200	3,000	5,610	9,440
	1.000	120	XXS	125.61	331.60	X46	46,400	63,100	3,000	6,190	9,900
	1.000	120	XXS	125.61	331.60	X52	52,200	66,700	3,000	6,960	10,460
	1.000	120	XXS	125.61	331.60	X56	56,600	71,100	3,000	7,260	11,150
	1.000	120	XXS	125.61	331.60	X60	60,200	75,400	3,000	7,260	11,830
	1.000	120	XXS	125.61	331.60	X65	65,300	77,600	3,000	7,260	12,170
	1.000	120	XXS	125.61	331.60	X70	70,300	82,700	3,000	7,260	12,970
	1.000	120	XXS	125.61	331.60	X80	80,500	90,600	3,000	7,260	14,210
	1.125	140		139.81	369.09	B	35,500	60,200	2,800	2,800	10,620
	1.125	140		139.81	369.09	C	40,000	70,000	2,800		12,350
	1.125	140		139.81	369.09	X42	42,100	60,200	3,000	6,320	10,620
	1.125	140		139.81	369.09	X46	46,400	63,100	3,000	6,960	11,140
	1.125	140		139.81	369.09	X52	52,200	66,700	3,000	7,260	11,770
	1.125	140		139.81	369.09	X56	56,600	71,100	3,000	7,260	12,550
	1.125	140		139.81	369.09	X60	60,200	75,400	3,000	7,260	13,310
	1.125	140		139.81	369.09	X65	65,300	77,600	3,000	7,260	13,690
	1.125	140		139.81	369.09	X70	70,300	82,700	3,000	7,260	14,590
	1.125	140		139.81	369.09	X80	80,500	90,600	3,000	7,260	15,990
	1.312	160		160.42	423.51	B	35,500	60,200	2,800	2,800	12,390
	1.312	160		160.42	423.51	C	40,000	70,000	2,800		14,410
	1.312	160		160.42	423.51	X42	42,100	60,200	3,000	7,260	12,390
	1.312	160		160.42	423.51	X46	46,400	63,100	3,000	7,260	12,990
	1.312	160		160.42	423.51	X52	52,200	66,700	3,000	7,260	13,730
	1.312	160		160.42	423.51	X56	56,600	71,100	3,000	7,260	14,630
	1.312	160		160.42	423.51	X60	60,200	75,400	3,000	7,260	15,520
	1.312	160		160.42	423.51	X65	65,300	77,600	3,000	7,260	15,970
	1.312	160		160.42	423.51	X70	70,300	82,700	3,000	7,260	17,020
	1.312	160		160.42	423.51	X80	80,500	90,600	3,000	7,260	18,650

NOTE: This table is meant to be an abbreviated reference tool for the most common sizes and grades offered by U. S. Steel Tubular Products. To download a PDF version of the performance data or a complete listing, visit www.usstubular.com/connections/sl.

Outside Diameter NPS (inches)	Wall			Weight		Grade	Specified Minimum Strength (psi)		Mill Hydrostatic Test Pressure (psi)		Ultimate Burst (psi)
	Inches	Schedule Number	Class	lb/ft Plain End	Tons/ Mile		Yield	Tensile	Standard	Alternate	
OD 14.000											
NPS 14 OD 14.000 ERW	0.219			32.26	85.17	B	35,500	60,200	670	830	1,880
	0.219			32.26	85.17	C	40,000	70,000	750		2,190
	0.219			32.26	85.17	X42	42,100	60,200	1,120	1,120	1,880
	0.219			32.26	85.17	X46	46,400	63,100	1,230	1,230	1,970
	0.219			32.26	85.17	X52	52,200	66,700	1,390	1,390	2,090
	0.219			32.26	85.17	X56	56,600	71,100	1,510	1,510	2,220
	0.219			32.26	85.17	X60	60,200	75,400	1,600	1,600	2,360
	0.219			32.26	85.17	X65	65,300	77,600	1,740	1,740	2,430
	0.219			32.26	85.17	X70	70,300	82,700	1,870	1,870	2,590
	0.250			36.75	97.01	B	35,500	60,200	760	950	2,150
	0.250			36.75	97.01	C	40,000	70,000	860		2,500
	0.250			36.75	97.01	X42	42,100	60,200	1,280	1,280	2,150
	0.250			36.75	97.01	X46	46,400	63,100	1,410	1,410	2,250
	0.250			36.75	97.01	X52	52,200	66,700	1,580	1,580	2,380
	0.250			36.75	97.01	X56	56,600	71,100	1,720	1,720	2,540
	0.250			36.75	97.01	X60	60,200	75,400	1,830	1,830	2,690
	0.250			36.75	97.01	X65	65,300	77,600	1,980	1,980	2,770
	0.250			36.75	97.01	X70	70,300	82,700	2,130	2,130	2,950
	0.281			41.21	108.80	B	35,500	60,200	860	1,070	2,420
	0.281			41.21	108.80	C	40,000	70,000	960		2,810
	0.281			41.21	108.80	X42	42,100	60,200	1,440	1,440	2,420
	0.281			41.21	108.80	X46	46,400	63,100	1,580	1,580	2,530
	0.281			41.21	108.80	X52	52,200	66,700	1,780	1,780	2,680
	0.281			41.21	108.80	X56	56,600	71,100	1,930	1,930	2,850
	0.281			41.21	108.80	X60	60,200	75,400	2,050	2,050	3,030
	0.281			41.21	108.80	X65	65,300	77,600	2,230	2,230	3,120
	0.281			41.21	108.80	X70	70,300	82,700	2,400	2,400	3,320
	0.312	20		45.65	120.52	B	35,500	60,200	950	1,190	2,680
	0.312	20		45.65	120.52	C	40,000	70,000	1,070		3,120
	0.312	20		45.65	120.52	X42	42,100	60,200	1,590	1,590	2,680
	0.312	20		45.65	120.52	X46	46,400	63,100	1,760	1,760	2,810
	0.312	20		45.65	120.52	X52	52,200	66,700	1,980	1,980	2,970
	0.312	20		45.65	120.52	X56	56,600	71,100	2,140	2,140	3,170
	0.312	20		45.65	120.52	X60	60,200	75,400	2,280	2,280	3,360
	0.312	20		45.65	120.52	X65	65,300	77,600	2,470	2,470	3,460
	0.312	20		45.65	120.52	X70	70,300	82,700	2,660	2,660	3,690
	0.344			50.22	132.58	B	35,500	60,200	1,050	1,310	2,960
	0.344			50.22	132.58	C	40,000	70,000	1,180		3,440
	0.344			50.22	132.58	X42	42,100	60,200	1,760	1,760	2,960
	0.344			50.22	132.58	X46	46,400	63,100	1,940	1,940	3,100
	0.344			50.22	132.58	X52	52,200	66,700	2,180	2,180	3,280
	0.344			50.22	132.58	X56	56,600	71,100	2,360	2,360	3,490
	0.344			50.22	132.58	X60	60,200	75,400	2,510	2,510	3,710
	0.344			50.22	132.58	X65	65,300	77,600	2,730	2,730	3,810
	0.344			50.22	132.58	X70	70,300	82,700	2,940	2,940	4,060

STANDARD PIPE & LINE PIPE TABLES

Outside Diameter NPS (inches)	Wall			Weight		Grade	Specified Minimum Strength (psi)		Mill Hydrostatic Test Pressure (psi)		Ultimate Burst (psi)
	Inches	Schedule Number	Class	lb/ft Plain End	Tons/ Mile		Yield	Tensile	Standard	Alternate	
OD 14.000											
NPS 14 OD 14.000 Seamless & ERW	0.375	30	STD	54.62	144.19	B	35,500	60,200	1,140	1,430	3,230
	0.375	30	STD	54.62	144.19	C	40,000	70,000	1,290		3,750
	0.375	30	STD	54.62	144.19	X42	42,100	60,200	1,920	1,920	3,230
	0.375	30	STD	54.62	144.19	X46	46,400	63,100	2,110	2,110	3,380
	0.375	30	STD	54.62	144.19	X52	52,200	66,700	2,380	2,380	3,570
	0.375	30	STD	54.62	144.19	X56	56,600	71,100	2,580	2,580	3,810
	0.375	30	STD	54.62	144.19	X60	60,200	75,400	2,740	2,740	4,040
	0.375	30	STD	54.62	144.19	X65	65,300	77,600	2,970	2,970	4,160
	0.375	30	STD	54.62	144.19	X70	70,300	82,700	3,000	3,200	4,430
	0.375	30	STD	54.62	144.19	X80[1]	80,500	90,600	3,000	3,670	4,850
	0.406			59.00	155.76	B	35,500	60,200	1,240	1,540	3,490
	0.406			59.00	155.76	C	40,000	70,000	1,390		4,060
	0.406			59.00	155.76	X42	42,100	60,200	2,080	2,080	3,490
	0.406			59.00	155.76	X46	46,400	63,100	2,290	2,290	3,660
	0.406			59.00	155.76	X52	52,200	66,700	2,570	2,570	3,870
	0.406			59.00	155.76	X56	56,600	71,100	2,790	2,790	4,120
	0.406			59.00	155.76	X60	60,200	75,400	2,970	2,970	4,370
	0.406			59.00	155.76	X65	65,300	77,600	3,000	3,220	4,500
	0.406			59.00	155.76	X70	70,300	82,700	3,000	3,470	4,800
	0.406			59.00	155.76	X80	80,500	90,600	3,000	3,970	5,250
	0.438	40		63.50	167.64	B	35,500	60,200	1,330	1,670	3,770
	0.438	40		63.50	167.64	C	40,000	70,000	1,500		4,380
	0.438	40		63.50	167.64	X42	42,100	60,200	2,240	2,240	3,770
	0.438	40		63.50	167.64	X46	46,400	63,100	2,470	2,470	3,950
	0.438	40		63.50	167.64	X52	52,200	66,700	2,780	2,780	4,170
	0.438	40		63.50	167.64	X56	56,600	71,100	3,000	3,010	4,450
	0.438	40		63.50	167.64	X60	60,200	75,400	3,000	3,200	4,720
	0.438	40		63.50	167.64	X65	65,300	77,600	3,000	3,470	4,860
	0.438	40		63.50	167.64	X70	70,300	82,700	3,000	3,740	5,170
	0.438	40		63.50	167.64	X80	80,500	90,600	3,000	4,280	5,670
	0.469			67.84	179.10	B	35,500	60,200	1,430	1,780	4,030
	0.469			67.84	179.10	C	40,000	70,000	1,610		4,690
	0.469			67.84	179.10	X42	42,100	60,200	2,400	2,400	4,030
	0.469			67.84	179.10	X46	46,400	63,100	2,640	2,640	4,230
	0.469			67.84	179.10	X52	52,200	66,700	2,970	2,970	4,470
	0.469			67.84	179.10	X56	56,600	71,100	3,000	3,220	4,760
	0.469			67.84	179.10	X60	60,200	75,400	3,000	3,430	5,050
	0.469			67.84	179.10	X65	65,300	77,600	3,000	3,720	5,200
	0.469			67.84	179.10	X70	70,300	82,700	3,000	4,000	5,540
	0.469			67.84	179.10	X80	80,500	90,600	3,000	4,580	6,070
	0.500		XS	72.16	190.50	B	35,500	60,200	1,520	1,900	4,300
	0.500		XS	72.16	190.50	C	40,000	70,000	1,710		5,000
	0.500		XS	72.16	190.50	X42	42,100	60,200	2,560	2,560	4,300
	0.500		XS	72.16	190.50	X46	46,400	63,100	2,820	2,820	4,510

1. Available in seamless only.

NOTE: This table is meant to be an abbreviated reference tool for the most common sizes and grades offered by U. S. Steel Tubular Products. To download a PDF version of the performance data or a complete listing, visit www.usstubular.com/connections/sl.

Outside Diameter NPS (inches)	Wall			Weight		Grade	Specified Minimum Strength (psi)		Mill Hydrostatic Test Pressure (psi)		Ultimate Burst (psi)
	Inches	Schedule Number	Class	lb/ft Plain End	Tons/ Mile		Yield	Tensile	Standard	Alternate	
OD 14.000											
NPS 14 OD 14.000 Seamless & ERW	0.500		XS	72.16	190.50	X52	52,200	66,700	3,000	3,170	4,760
	0.500		XS	72.16	190.50	X56	56,600	71,100	3,000	3,440	5,080
	0.500		XS	72.16	190.50	X60	60,200	75,400	3,000	3,660	5,390
	0.500		XS	72.16	190.50	X65	65,300	77,600	3,000	3,960	5,540
	0.500		XS	72.16	190.50	X70	70,300	82,700	3,000	4,270	5,910
	0.500		XS	72.16	190.50	X80	80,500	90,600	3,000	4,890	6,470
	0.562			80.73	213.13	B	35,500	60,200	1,710	2,140	4,830
	0.562			80.73	213.13	C	40,000	70,000	1,930		5,620
	0.562			80.73	213.13	X42	42,100	60,200	2,870	2,870	4,830
	0.562			80.73	213.13	X46	46,400	63,100	3,000	3,170	5,070
	0.562			80.73	213.13	X52	52,200	66,700	3,000	3,560	5,360
	0.562			80.73	213.13	X56	56,600	71,100	3,000	3,860	5,710
	0.562			80.73	213.13	X60	60,200	75,400	3,000	4,110	6,050
	0.562			80.73	213.13	X65	65,300	77,600	3,000	4,460	6,230
	0.562			80.73	213.13	X70	70,300	82,700	3,000	4,800	6,640
	0.562			80.73	213.13	X80[1]	80,500	90,600	3,000	5,490	7,270
NPS 14 OD 14.000 Seamless	0.594	60		85.13	224.73	B	35,500	60,200	1,810	2,260	5,110
	0.594	60		85.13	224.73	C	40,000	70,000	2,040		5,940
	0.594	60		85.13	224.73	X42	42,100	60,200	3,000	3,040	5,110
	0.594	60		85.13	224.73	X46	46,400	63,100	3,000	3,350	5,350
	0.594	60		85.13	224.73	X52	52,200	66,700	3,000	3,770	5,660
	0.594	60		85.13	224.73	X56	56,600	71,100	3,000	4,080	6,030
	0.594	60		85.13	224.73	X60	60,200	75,400	3,000	4,340	6,400
	0.594	60		85.13	224.73	X65	65,300	77,600	3,000	4,710	6,580
	0.594	60		85.13	224.73	X70	70,300	82,700	3,000	5,070	7,020
	0.594	60		85.13	224.73	X80	80,500	90,600	3,000	5,810	7,690
	0.625			89.36	235.91	B	35,500	60,200	1,900	2,380	5,380
	0.625			89.36	235.91	C	40,000	70,000	2,140		6,250
	0.625			89.36	235.91	X42	42,100	60,200	3,000	3,200	5,380
	0.625			89.36	235.91	X46	46,400	63,100	3,000	3,520	5,630
	0.625			89.36	235.91	X52	52,200	66,700	3,000	3,960	5,960
	0.625			89.36	235.91	X56	56,600	71,100	3,000	4,300	6,350
	0.625			89.36	235.91	X60	60,200	75,400	3,000	4,570	6,730
	0.625			89.36	235.91	X65	65,300	77,600	3,000	4,960	6,930
	0.625			89.36	235.91	X70	70,300	82,700	3,000	5,340	7,380
	0.625			89.36	235.91	X80	80,500	90,600	3,000	6,110	8,090
	0.688			97.91	258.47	B	35,500	60,200	2,090	2,620	5,920
	0.688			97.91	258.47	C	40,000	70,000	2,360		6,880
	0.688			97.91	258.47	X42	42,100	60,200	3,000	3,520	5,920
	0.688			97.91	258.47	X46	46,400	63,100	3,000	3,880	6,200
	0.688			97.91	258.47	X52	52,200	66,700	3,000	4,360	6,560
	0.688			97.91	258.47	X56	56,600	71,100	3,000	4,730	6,990
	0.688			97.91	258.47	X60	60,200	75,400	3,000	5,030	7,410
	0.688			97.91	258.47	X65	65,300	77,600	3,000	5,460	7,630

1. Available in seamless only.

STANDARD PIPE & LINE PIPE TABLES

Outside Diameter NPS (inches)	Wall			Weight		Grade	Specified Minimum Strength (psi)		Mill Hydrostatic Test Pressure (psi)		Ultimate Burst (psi)
	Inches	Schedule Number	Class	lb/ft Plain End	Tons/ Mile		Yield	Tensile	Standard	Alternate	
OD 14.000											
NPS 14 OD 14.000 Seamless	0.688			97.91	258.47	X70	70,300	82,700	3,000	5,870	8,130
	0.688			97.91	258.47	X80	80,500	90,600	3,000	6,730	8,900
	0.750	80		106.23	280.45	B	35,500	60,200	2,280	2,800	6,450
	0.750	80		106.23	280.45	C	40,000	70,000	2,570		7,500
	0.750	80		106.23	280.45	X42	42,100	60,200	3,000	3,830	6,450
	0.750	80		106.23	280.45	X46	46,400	63,100	3,000	4,230	6,760
	0.750	80		106.23	280.45	X52	52,200	66,700	3,000	4,750	7,150
	0.750	80		106.23	280.45	X56	56,600	71,100	3,000	5,150	7,620
	0.750	80		106.23	280.45	X60	60,200	75,400	3,000	5,480	8,080
	0.750	80		106.23	280.45	X65	65,300	77,600	3,000	5,950	8,310
	0.750	80		106.23	280.45	X70	70,300	82,700	3,000	6,400	8,860
	0.750	80		106.23	280.45	X80	80,500	90,600	3,000	7,260	9,710
	0.812			114.48	302.22	B	35,500	60,200	2,470	2,800	6,980
	0.812			114.48	302.22	C	40,000	70,000	2,800		8,120
	0.812			114.48	302.22	X42	42,100	60,200	3,000	4,150	6,980
	0.812			114.48	302.22	X46	46,400	63,100	3,000	4,580	7,320
	0.812			114.48	302.22	X52	52,200	66,700	3,000	5,150	7,740
	0.812			114.48	302.22	X56	56,600	71,100	3,000	5,580	8,250
	0.812			114.48	302.22	X60	60,200	75,400	3,000	5,940	8,750
	0.812			114.48	302.22	X65	65,300	77,600	3,000	6,440	9,000
	0.812			114.48	302.22	X70	70,300	82,700	3,000	6,930	9,590
	0.812			114.48	302.22	X80	80,500	90,600	3,000	7,260	10,510
	0.938	100		130.98	345.78	B	35,500	60,200	2,800	2,800	8,070
	0.938	100		130.98	345.78	C	40,000	70,000	2,800		9,380
	0.938	100		130.98	345.78	X42	42,100	60,200	3,000	4,800	8,070
	0.938	100		130.98	345.78	X46	46,400	63,100	3,000	5,280	8,460
	0.938	100		130.98	345.78	X52	52,200	66,700	3,000	5,950	8,940
	0.938	100		130.98	345.78	X56	56,600	71,100	3,000	6,450	9,530
	0.938	100		130.98	345.78	X60	60,200	75,400	3,000	6,860	10,100
	0.938	100		130.98	345.78	X65	65,300	77,600	3,000	7,260	10,400
	0.938	100		130.98	345.78	X70	70,300	82,700	3,000	7,260	11,080
	0.938	100		130.98	345.78	X80	80,500	90,600	3,000	7,260	12,140
	1.094	120		150.93	398.47	B	35,500	60,200	2,800	2,800	9,410
	1.094	120		150.93	398.47	C	40,000	70,000	2,800		10,940
	1.094	120		150.93	398.47	X42	42,100	60,200	3,000	5,590	9,410
	1.094	120		150.93	398.47	X46	46,400	63,100	3,000	6,160	9,860
	1.094	120		150.93	398.47	X52	52,200	66,700	3,000	6,930	10,420
	1.094	120		150.93	398.47	X56	56,600	71,100	3,000	7,260	11,110
	1.094	120		150.93	398.47	X60	60,200	75,400	3,000	7,260	11,780
	1.094	120		150.93	398.47	X65	65,300	77,600	3,000	7,260	12,130
	1.094	120		150.93	398.47	X70	70,300	82,700	3,000	7,260	12,920
	1.094	120		150.93	398.47	X80	80,500	90,600	3,000	7,260	14,160
	1.250	140		170.37	449.78	B	35,500	60,200	2,800	2,800	10,750
	1.250	140		170.37	449.78	C	40,000	70,000	2,800		12,500

NOTE: This table is meant to be an abbreviated reference tool for the most common sizes and grades offered by U. S. Steel Tubular Products. To download a PDF version of the performance data or a complete listing, visit www.usstubular.com/connections/sl.

Outside Diameter NPS (inches)	Wall			Weight		Grade	Specified Minimum Strength (psi)		Mill Hydrostatic Test Pressure (psi)		Ultimate Burst (psi)
	Inches	Schedule Number	Class	lb/ft Plain End	Tons/ Mile		Yield	Tensile	Standard	Alternate	
OD 14.000											
NPS 14 OD 14.000 Seamless	1.250	140		170.37	449.78	X42	42,100	60,200	3,000	6,390	10,750
	1.250	140		170.37	449.78	X46	46,400	63,100	3,000	7,040	11,270
	1.250	140		170.37	449.78	X52	52,200	66,700	3,000	7,260	11,910
	1.250	140		170.37	449.78	X56	56,600	71,100	3,000	7,260	12,700
	1.250	140		170.37	449.78	X60	60,200	75,400	3,000	7,260	13,460
	1.250	140		170.37	449.78	X65	65,300	77,600	3,000	7,260	13,860
	1.250	140		170.37	449.78	X70	70,300	82,700	3,000	7,260	14,770
	1.250	140		170.37	449.78	X80	80,500	90,600	3,000	7,260	16,180
	1.406	160		189.29	499.72	B	35,500	60,200	2,800	2,800	12,090
	1.406	160		189.29	499.72	C	40,000	70,000	2,800		14,060
	1.406	160		189.29	499.72	X42	42,100	60,200	3,000	7,190	12,090
	1.406	160		189.29	499.72	X46	46,400	63,100	3,000	7,260	12,670
	1.406	160		189.29	499.72	X52	52,200	66,700	3,000	7,260	13,400
	1.406	160		189.29	499.72	X56	56,600	71,100	3,000	7,260	14,280
	1.406	160		189.29	499.72	X60	60,200	75,400	3,000	7,260	15,140
	1.406	160		189.29	499.72	X65	65,300	77,600	3,000	7,260	15,590
	1.406	160		189.29	499.72	X70	70,300	82,700	3,000	7,260	16,610
	1.406	160		189.29	499.72	X80	80,500	90,600	3,000	7,260	18,200
OD 16.000											
NPS 16 OD 16.000 ERW	0.219			36.95	97.53	B	35,500	60,200	580	730	1,650
	0.219			36.95	97.53	C	40,000	70,000	660		1,920
	0.219			36.95	97.53	X42	42,100	60,200	980	980	1,650
	0.219			36.95	97.53	X46	46,400	63,100	1,080	1,080	1,730
	0.219			36.95	97.53	X52	52,200	66,700	1,210	1,210	1,830
	0.219			36.95	97.53	X56	56,600	71,100	1,320	1,320	1,950
	0.219			36.95	97.53	X60	60,200	75,400	1,400	1,400	2,060
	0.219			36.95	97.53	X65	65,300	77,600	1,520	1,520	2,120
	0.219			36.95	97.53	X70	70,300	82,700	1,640	1,640	2,260
	0.250			42.09	111.12	B	35,500	60,200	670	830	1,880
	0.250			42.09	111.12	C	40,000	70,000	750		2,190
	0.250			42.09	111.12	X42	42,100	60,200	1,120	1,120	1,880
	0.250			42.09	111.12	X46	46,400	63,100	1,230	1,230	1,970
	0.250			42.09	111.12	X52	52,200	66,700	1,390	1,390	2,080
	0.250			42.09	111.12	X56	56,600	71,100	1,500	1,500	2,220
	0.250			42.09	111.12	X60	60,200	75,400	1,600	1,600	2,360
	0.250			42.09	111.12	X65	65,300	77,600	1,730	1,730	2,430
	0.250			42.09	111.12	X70	70,300	82,700	1,870	1,870	2,580
	0.281			47.22	124.66	B	35,500	60,200	750	940	2,110
	0.281			47.22	124.66	C	40,000	70,000	840		2,460
	0.281			47.22	124.66	X42	42,100	60,200	1,260	1,260	2,110
	0.281			47.22	124.66	X46	46,400	63,100	1,390	1,390	2,220
	0.281			47.22	124.66	X52	52,200	66,700	1,560	1,560	2,340
	0.281			47.22	124.66	X56	56,600	71,100	1,690	1,690	2,500

STANDARD PIPE & LINE PIPE TABLES

Outside Diameter NPS (inches)	Wall			Weight		Grade	Specified Minimum Strength (psi)		Mill Hydrostatic Test Pressure (psi)		Ultimate Burst (psi)
	Inches	Schedule Number	Class	lb/ft Plain End	Tons/ Mile		Yield	Tensile	Standard	Alternate	
OD 16.000											
NPS 16 OD 16.000 ERW	0.281			47.22	124.66	X60	60,200	75,400	1,800	1,800	2,650
	0.281			47.22	124.66	X65	65,300	77,600	1,950	1,950	2,730
	0.281			47.22	124.66	X70	70,300	82,700	2,100	2,100	2,900
	0.312	20		52.32	138.14	B	35,500	60,200	830	1,040	2,350
	0.312	20		52.32	138.14	C	40,000	70,000	940		2,730
	0.312	20		52.32	138.14	X42	42,100	60,200	1,400	1,400	2,350
	0.312	20		52.32	138.14	X46	46,400	63,100	1,540	1,540	2,460
	0.312	20		52.32	138.14	X52	52,200	66,700	1,730	1,730	2,600
	0.312	20		52.32	138.14	X56	56,600	71,100	1,880	1,880	2,770
	0.312	20		52.32	138.14	X60	60,200	75,400	2,000	2,000	2,940
	0.312	20		52.32	138.14	X65	65,300	77,600	2,160	2,160	3,030
	0.312	20		52.32	138.14	X70	70,300	82,700	2,330	2,330	3,230
	0.344			57.57	151.99	B	35,500	60,200	920	1,140	2,590
	0.344			57.57	151.99	C	40,000	70,000	1,030		3,010
	0.344			57.57	151.99	X42	42,100	60,200	1,540	1,540	2,590
	0.344			57.57	151.99	X46	46,400	63,100	1,700	1,700	2,710
	0.344			57.57	151.99	X52	52,200	66,700	1,910	1,910	2,870
	0.344			57.57	151.99	X56	56,600	71,100	2,070	2,070	3,060
	0.344			57.57	151.99	X60	60,200	75,400	2,200	2,200	3,240
	0.344			57.57	151.99	X65	65,300	77,600	2,390	2,390	3,340
	0.344			57.57	151.99	X70	70,300	82,700	2,570	2,570	3,560
NPS 16 OD 16.000 Seamless & ERW	0.375	30	STD	62.64	165.36	B	35,500	60,200	1,000	1,250	2,820
	0.375	30	STD	62.64	165.36	C	40,000	70,000	1,130		3,280
	0.375	30	STD	62.64	165.36	X42	42,100	60,200	1,680	1,680	2,820
	0.375	30	STD	62.64	165.36	X46	46,400	63,100	1,850	1,850	2,960
	0.375	30	STD	62.64	165.36	X52	52,200	66,700	2,080	2,080	3,130
	0.375	30	STD	62.64	165.36	X56	56,600	71,100	2,260	2,260	3,330
	0.375	30	STD	62.64	165.36	X60	60,200	75,400	2,400	2,400	3,530
	0.375	30	STD	62.64	165.36	X65	65,300	77,600	2,600	2,600	3,640
	0.375	30	STD	62.64	165.36	X70	70,300	82,700	2,800	2,800	3,880
	0.375	30	STD	62.64	165.36	X80[1]	80,500	90,600	3,000	3,210	4,250
	0.406			67.68	178.68	B	35,500	60,200	1,080	1,350	3,060
	0.406			67.68	178.68	C	40,000	70,000	1,220		3,550
	0.406			67.68	178.68	X42	42,100	60,200	1,820	1,820	3,060
	0.406			67.68	178.68	X46	46,400	63,100	2,000	2,000	3,200
	0.406			67.68	178.68	X52	52,200	66,700	2,250	2,250	3,390
	0.406			67.68	178.68	X56	56,600	71,100	2,440	2,440	3,610
	0.406			67.68	178.68	X60	60,200	75,400	2,600	2,600	3,830
	0.406			67.68	178.68	X65	65,300	77,600	2,820	2,820	3,940
	0.406			67.68	178.68	X70	70,300	82,700	3,000	3,030	4,200
	0.406			67.68	178.68	X80	80,500	90,600	3,000	3,470	4,600

1. Available in seamless only.

NOTE: This table is meant to be an abbreviated reference tool for the most common sizes and grades offered by U. S. Steel Tubular Products. To download a PDF version of the performance data or a complete listing, visit www.usstubular.com/connections/sl.

Outside Diameter NPS (inches)	Wall			Weight		Grade	Specified Minimum Strength (psi)		Mill Hydrostatic Test Pressure (psi)		Ultimate Burst (psi)
	Inches	Schedule Number	Class	lb/ft Plain End	Tons/ Mile		Yield	Tensile	Standard	Alternate	
OD 16.000											
NPS 16 OD 16.000 Seamless & ERW	0.438			72.86	192.36	B	35,500	60,200	1,170	1,460	3,300
	0.438			72.86	192.36	C	40,000	70,000	1,310		3,830
	0.438			72.86	192.36	X42	42,100	60,200	1,960	1,960	3,300
	0.438			72.86	192.36	X46	46,400	63,100	2,160	2,160	3,450
	0.438			72.86	192.36	X52	52,200	66,700	2,430	2,430	3,650
	0.438			72.86	192.36	X56	56,600	71,100	2,630	2,630	3,890
	0.438			72.86	192.36	X60	60,200	75,400	2,800	2,800	4,130
	0.438			72.86	192.36	X65	65,300	77,600	3,000	3,040	4,250
	0.438			72.86	192.36	X70	70,300	82,700	3,000	3,270	4,530
	0.438			72.86	192.36	X80	80,500	90,600	3,000	3,750	4,960
	0.469			77.87	205.57	B	35,500	60,200	1,250	1,560	3,530
	0.469			77.87	205.57	C	40,000	70,000	1,410		4,100
	0.469			77.87	205.57	X42	42,100	60,200	2,100	2,100	3,530
	0.469			77.87	205.57	X46	46,400	63,100	2,310	2,310	3,700
	0.469			77.87	205.57	X52	52,200	66,700	2,600	2,600	3,910
	0.469			77.87	205.57	X56	56,600	71,100	2,820	2,820	4,170
	0.469			77.87	205.57	X60	60,200	75,400	3,000	3,000	4,420
	0.469			77.87	205.57	X65	65,300	77,600	3,000	3,250	4,550
	0.469			77.87	205.57	X70	70,300	82,700	3,000	3,500	4,850
	0.469			77.87	205.57	X80	80,500	90,600	3,000	4,010	5,310
	0.500	40	XS	82.85	218.72	B	35,500	60,200	1,330	1,660	3,760
	0.500	40	XS	82.85	218.72	C	40,000	70,000	1,500		4,380
	0.500	40	XS	82.85	218.72	X42	42,100	60,200	2,240	2,240	3,760
	0.500	40	XS	82.85	218.72	X46	46,400	63,100	2,470	2,470	3,940
	0.500	40	XS	82.85	218.72	X52	52,200	66,700	2,770	2,770	4,170
	0.500	40	XS	82.85	218.72	X56	56,600	71,100	3,000	3,010	4,440
	0.500	40	XS	82.85	218.72	X60	60,200	75,400	3,000	3,200	4,710
	0.500	40	XS	82.85	218.72	X65	65,300	77,600	3,000	3,470	4,850
	0.500	40	XS	82.85	218.72	X70	70,300	82,700	3,000	3,730	5,170
	0.500	40	XS	82.85	218.72	X80	80,500	90,600	3,000	4,280	5,660
	0.562			92.75	244.86	B	35,500	60,200	1,500	1,870	4,230
	0.562			92.75	244.86	C	40,000	70,000	1,690		4,920
	0.562			92.75	244.86	X42	42,100	60,200	2,510	2,510	4,230
	0.562			92.75	244.86	X46	46,400	63,100	2,770	2,770	4,430
	0.562			92.75	244.86	X52	52,200	66,700	3,000	3,120	4,690
	0.562			92.75	244.86	X56	56,600	71,100	3,000	3,380	4,990
	0.562			92.75	244.86	X60	60,200	75,400	3,000	3,590	5,300
	0.562			92.75	244.86	X65	65,300	77,600	3,000	3,900	5,450
	0.562			92.75	244.86	X70	70,300	82,700	3,000	4,200	5,810
	0.562			92.75	244.86	X80[1]	80,500	90,600	3,000	4,810	6,360

1. Available in seamless only.

STANDARD PIPE & LINE PIPE TABLES

Outside Diameter NPS (inches)	Wall			Weight		Grade	Specified Minimum Strength (psi)		Mill Hydrostatic Test Pressure (psi)		Ultimate Burst (psi)
	Inches	Schedule Number	Class	lb/ft Plain End	Tons/ Mile		Yield	Tensile	Standard	Alternate	
OD 16.000											
NPS 16 OD 16.000 Seamless	0.625			102.72	271.19	B	35,500	60,200	1,660	2,080	4,700
	0.625			102.72	271.19	C	40,000	70,000	1,880		5,470
	0.625			102.72	271.19	X42	42,100	60,200	2,800	2,800	4,700
	0.625			102.72	271.19	X46	46,400	63,100	3,000	3,080	4,930
	0.625			102.72	271.19	X52	52,200	66,700	3,000	3,470	5,210
	0.625			102.72	271.19	X56	56,600	71,100	3,000	3,760	5,550
	0.625			102.72	271.19	X60	60,200	75,400	3,000	4,000	5,890
	0.625			102.72	271.19	X65	65,300	77,600	3,000	4,340	6,060
	0.625			102.72	271.19	X70	70,300	82,700	3,000	4,670	6,460
	0.625			102.72	271.19	X80	80,500	90,600	3,000	5,350	7,080
	0.656	60		107.60	284.07	B	35,500	60,200	1,750	2,180	4,940
	0.656	60		107.60	284.07	C	40,000	70,000	1,970		5,740
	0.656	60		107.60	284.07	X42	42,100	60,200	2,930	2,930	4,940
	0.656	60		107.60	284.07	X46	46,400	63,100	3,000	3,230	5,170
	0.656	60		107.60	284.07	X52	52,200	66,700	3,000	3,640	5,470
	0.656	60		107.60	284.07	X56	56,600	71,100	3,000	3,950	5,830
	0.656	60		107.60	284.07	X60	60,200	75,400	3,000	4,200	6,180
	0.656	60		107.60	284.07	X65	65,300	77,600	3,000	4,550	6,360
	0.656	60		107.60	284.07	X70	70,300	82,700	3,000	4,900	6,780
	0.656	60		107.60	284.07	X80	80,500	90,600	3,000	5,610	7,430
	0.688			112.62	297.30	B	35,500	60,200	1,830	2,290	5,180
	0.688			112.62	297.30	C	40,000	70,000	2,060		6,020
	0.688			112.62	297.30	X42	42,100	60,200	3,000	3,080	5,180
	0.688			112.62	297.30	X46	46,400	63,100	3,000	3,390	5,430
	0.688			112.62	297.30	X52	52,200	66,700	3,000	3,820	5,740
	0.688			112.62	297.30	X56	56,600	71,100	3,000	4,140	6,110
	0.688			112.62	297.30	X60	60,200	75,400	3,000	4,400	6,480
	0.688			112.62	297.30	X65	65,300	77,600	3,000	4,770	6,670
	0.688			112.62	297.30	X70	70,300	82,700	3,000	5,140	7,110
	0.688			112.62	297.30	X80	80,500	90,600	3,000	5,880	7,790
	0.750			122.27	322.78	B	35,500	60,200	2,000	2,500	5,640
	0.750			122.27	322.78	C	40,000	70,000	2,250		6,560
	0.750			122.27	322.78	X42	42,100	60,200	3,000	3,350	5,640
	0.750			122.27	322.78	X46	46,400	63,100	3,000	3,700	5,920
	0.750			122.27	322.78	X52	52,200	66,700	3,000	4,160	6,250
	0.750			122.27	322.78	X56	56,600	71,100	3,000	4,510	6,670
	0.750			122.27	322.78	X60	60,200	75,400	3,000	4,800	7,070
	0.750			122.27	322.78	X65	65,300	77,600	3,000	5,200	7,280
	0.750			122.27	322.78	X70	70,300	82,700	3,000	5,600	7,750
	0.750			122.27	322.78	X80	80,500	90,600	3,000	6,410	8,490

NOTE: This table is meant to be an abbreviated reference tool for the most common sizes and grades offered by U. S. Steel Tubular Products. To download a PDF version of the performance data or a complete listing, visit www.usstubular.com/connections/sl.

Outside Diameter NPS (inches)	Wall			Weight		Grade	Specified Minimum Strength (psi)		Mill Hydrostatic Test Pressure (psi)		Ultimate Burst (psi)
	Inches	Schedule Number	Class	lb/ft Plain End	Tons/ Mile		Yield	Tensile	Standard	Alternate	
OD 16.000											
NPS 16 OD 16.000 Seamless	0.812			131.84	348.05	B	35,500	60,200	2,160	2,700	6,110
	0.812			131.84	348.05	C	40,000	70,000	2,440		7,110
	0.812			131.84	348.05	X42	42,100	60,200	3,000	3,630	6,110
	0.812			131.84	348.05	X46	46,400	63,100	3,000	4,000	6,400
	0.812			131.84	348.05	X52	52,200	66,700	3,000	4,500	6,770
	0.812			131.84	348.05	X56	56,600	71,100	3,000	4,880	7,220
	0.812			131.84	348.05	X60	60,200	75,400	3,000	5,190	7,650
	0.812			131.84	348.05	X65	65,300	77,600	3,000	5,630	7,880
	0.812			131.84	348.05	X70	70,300	82,700	3,000	6,070	8,390
	0.812			131.84	348.05	X80	80,500	90,600	3,000	6,950	9,200
	0.844	80		136.74	361.00	B	35,500	60,200	2,250	2,800	6,350
	0.844	80		136.74	361.00	C	40,000	70,000	2,530		7,390
	0.844	80		136.74	361.00	X42	42,100	60,200	3,000	3,780	6,350
	0.844	80		136.74	361.00	X46	46,400	63,100	3,000	4,160	6,660
	0.844	80		136.74	361.00	X52	52,200	66,700	3,000	4,680	7,040
	0.844	80		136.74	361.00	X56	56,600	71,100	3,000	5,080	7,500
	0.844	80		136.74	361.00	X60	60,200	75,400	3,000	5,400	7,950
	0.844	80		136.74	361.00	X65	65,300	77,600	3,000	5,860	8,190
	0.844	80		136.74	361.00	X70	70,300	82,700	3,000	6,300	8,720
	0.844	80		136.74	361.00	X80	80,500	90,600	3,000	7,220	9,560
	1.031	100		164.98	435.55	B	35,500	60,200	2,750	2,800	7,760
	1.031	100		164.98	435.55	C	40,000	70,000	2,800		9,020
	1.031	100		164.98	435.55	X42	42,100	60,200	3,000	4,610	7,760
	1.031	100		164.98	435.55	X46	46,400	63,100	3,000	5,080	8,130
	1.031	100		164.98	435.55	X52	52,200	66,700	3,000	5,720	8,600
	1.031	100		164.98	435.55	X56	56,600	71,100	3,000	6,200	9,160
	1.031	100		164.98	435.55	X60	60,200	75,400	3,000	6,590	9,720
	1.031	100		164.98	435.55	X65	65,300	77,600	3,000	7,150	10,000
	1.031	100		164.98	435.55	X70	70,300	82,700	3,000	7,260	10,660
	1.031	100		164.98	435.55	X80	80,500	90,600	3,000	7,260	11,680
	1.219	120		192.61	508.50	B	35,500	60,200	2,800	2,800	9,170
	1.219	120		192.61	508.50	C	40,000	70,000	2,800		10,670
	1.219	120		192.61	508.50	X42	42,100	60,200	3,000	5,450	9,170
	1.219	120		192.61	508.50	X46	46,400	63,100	3,000	6,010	9,610
	1.219	120		192.61	508.50	X52	52,200	66,700	3,000	6,760	10,160
	1.219	120		192.61	508.50	X56	56,600	71,100	3,000	7,260	10,830
	1.219	120		192.61	508.50	X60	60,200	75,400	3,000	7,260	11,490
	1.219	120		192.61	508.50	X65	65,300	77,600	3,000	7,260	11,820
	1.219	120		192.61	508.50	X70	70,300	82,700	3,000	7,260	12,600
	1.219	120		192.61	508.50	X80	80,500	90,600	3,000	7,260	13,810

STANDARD PIPE & LINE PIPE TABLES

Outside Diameter NPS (inches)	Wall			Weight		Grade	Specified Minimum Strength (psi)		Mill Hydrostatic Test Pressure (psi)		Ultimate Burst (psi)
	Inches	Schedule Number	Class	lb/ft Plain End	Tons/ Mile		Yield	Tensile	Standard	Alternate	
OD 16.000											
NPS 16 OD 16.000 Seamless	1.250			197.10	520.34	B	35,500	60,200	2,800	2,800	9,410
	1.250			197.10	520.34	C	40,000	70,000	2,800		10,940
	1.250			197.10	520.34	X42	42,100	60,200	3,000	5,590	9,410
	1.250			197.10	520.34	X46	46,400	63,100	3,000	6,160	9,860
	1.250			197.10	520.34	X52	52,200	66,700	3,000	6,930	10,420
	1.250			197.10	520.34	X56	56,600	71,100	3,000	7,260	11,110
	1.250			197.10	520.34	X60	60,200	75,400	3,000	7,260	11,780
	1.250			197.10	520.34	X65	65,300	77,600	3,000	7,260	12,130
	1.250			197.10	520.34	X70	70,300	82,700	3,000	7,260	12,920
	1.250			197.10	520.34	X80	80,500	90,600	3,000	7,260	14,160
	1.438	140		223.85	590.96	B	35,500	60,200	2,800	2,800	10,820
	1.438	140		223.85	590.96	C	40,000	70,000	2,800		12,580
	1.438	140		223.85	590.96	X42	42,100	60,200	3,000	6,430	10,820
	1.438	140		223.85	590.96	X46	46,400	63,100	3,000	7,090	11,340
	1.438	140		223.85	590.96	X52	52,200	66,700	3,000	7,260	11,990
	1.438	140		223.85	590.96	X56	56,600	71,100	3,000	7,260	12,780
	1.438	140		223.85	590.96	X60	60,200	75,400	3,000	7,260	13,550
	1.438	140		223.85	590.96	X65	65,300	77,600	3,000	7,260	13,950
	1.438	140		223.85	590.96	X70	70,300	82,700	3,000	7,260	14,870
	1.438	140		223.85	590.96	X80	80,500	90,600	3,000	7,260	16,290
	1.594	160		245.48	648.06	B	35,500	60,200	2,800	2,800	11,990
	1.594	160		245.48	648.06	C	40,000	70,000	2,800		13,950
	1.594	160		245.48	648.06	X42	42,100	60,200	3,000	7,130	11,990
	1.594	160		245.48	648.06	X46	46,400	63,100	3,000	7,260	12,570
	1.594	160		245.48	648.06	X52	52,200	66,700	3,000	7,260	13,290
	1.594	160		245.48	648.06	X56	56,600	71,100	3,000	7,260	14,170
	1.594	160		245.48	648.06	X60	60,200	75,400	3,000	7,260	15,020
	1.594	160		245.48	648.06	X65	65,300	77,600	3,000	7,260	15,460
	1.594	160		245.48	648.06	X70	70,300	82,700	3,000	7,260	16,480
	1.594	160		245.48	648.06	X80	80,500	90,600	3,000	7,260	18,050
OD 18.000											
NPS 18 OD 18.000 Seamless	0.375		STD	70.65	186.53	B	35,500	60,200	890	1,110	2,510
	0.375		STD	70.65	186.53	C	40,000	70,000	1,000		2,920
	0.375		STD	70.65	186.53	X42	42,100	60,200	1,490	1,490	2,510
	0.375		STD	70.65	186.53	X46	46,400	63,100	1,640	1,640	2,630
	0.375		STD	70.65	186.53	X52	52,200	66,700	1,850	1,850	2,780
	0.375		STD	70.65	186.53	X56	56,600	71,100	2,000	2,000	2,960
	0.375		STD	70.65	186.53	X60	60,200	75,400	2,130	2,130	3,140
	0.375		STD	70.65	186.53	X65	65,300	77,600	2,310	2,310	3,230
	0.375		STD	70.65	186.53	X70	70,300	82,700	2,490	2,490	3,450
	0.375		STD	70.65	186.53	X80	80,500	90,600	2,850	2,850	3,780

NOTE: This table is meant to be an abbreviated reference tool for the most common sizes and grades offered by U. S. Steel Tubular Products. To download a PDF version of the performance data or a complete listing, visit www.usstubular.com/connections/sl.

Outside Diameter NPS (inches)	Wall			Weight		Grade	Specified Minimum Strength (psi)		Mill Hydrostatic Test Pressure (psi)		Ultimate Burst (psi)
	Inches	Schedule Number	Class	lb/ft Plain End	Tons/ Mile		Yield	Tensile	Standard	Alternate	
OD 18.000											
NPS 18 OD 18.000 Seamless	0.406			76.36	201.59	B	35,500	60,200	960	1,200	2,720
	0.406			76.36	201.59	C	40,000	70,000	1,080		3,160
	0.406			76.36	201.59	X42	42,100	60,200	1,610	1,610	2,720
	0.406			76.36	201.59	X46	46,400	63,100	1,780	1,780	2,850
	0.406			76.36	201.59	X52	52,200	66,700	2,000	2,000	3,010
	0.406			76.36	201.59	X56	56,600	71,100	2,170	2,170	3,210
	0.406			76.36	201.59	X60	60,200	75,400	2,310	2,310	3,400
	0.406			76.36	201.59	X65	65,300	77,600	2,500	2,500	3,500
	0.406			76.36	201.59	X70	70,300	82,700	2,700	2,700	3,730
	0.406			76.36	201.59	X80	80,500	90,600	3,000	3,090	4,090
	0.438	30		82.23	217.08	B	35,500	60,200	1,040	1,300	2,930
	0.438	30		82.23	217.08	C	40,000	70,000	1,170		3,410
	0.438	30		82.23	217.08	X42	42,100	60,200	1,740	1,740	2,930
	0.438	30		82.23	217.08	X46	46,400	63,100	1,920	1,920	3,070
	0.438	30		82.23	217.08	X52	52,200	66,700	2,160	2,160	3,250
	0.438	30		82.23	217.08	X56	56,600	71,100	2,340	2,340	3,460
	0.438	30		82.23	217.08	X60	60,200	75,400	2,490	2,490	3,670
	0.438	30		82.23	217.08	X65	65,300	77,600	2,700	2,700	3,780
	0.438	30		82.23	217.08	X70	70,300	82,700	2,910	2,910	4,020
	0.438	30		82.23	217.08	X80	80,500	90,600	3,000	3,330	4,410
	0.469			87.89	232.04	B	35,500	60,200	1,110	1,390	3,140
	0.469			87.89	232.04	C	40,000	70,000	1,250		3,650
	0.469			87.89	232.04	X42	42,100	60,200	1,860	1,860	3,140
	0.469			87.89	232.04	X46	46,400	63,100	2,060	2,060	3,290
	0.469			87.89	232.04	X52	52,200	66,700	2,310	2,310	3,480
	0.469			87.89	232.04	X56	56,600	71,100	2,510	2,510	3,710
	0.469			87.89	232.04	X60	60,200	75,400	2,670	2,670	3,930
	0.469			87.89	232.04	X65	65,300	77,600	2,890	2,890	4,040
	0.469			87.89	232.04	X70	70,300	82,700	3,000	3,110	4,310
	0.469			87.89	232.04	X80	80,500	90,600	3,000	3,570	4,720
	0.500		XS	93.54	246.94	B	35,500	60,200	1,180	1,480	3,340
	0.500		XS	93.54	246.94	C	40,000	70,000	1,330		3,890
	0.500		XS	93.54	246.94	X42	42,100	60,200	1,990	1,990	3,340
	0.500		XS	93.54	246.94	X46	46,400	63,100	2,190	2,190	3,510
	0.500		XS	93.54	246.94	X52	52,200	66,700	2,470	2,470	3,710
	0.500		XS	93.54	246.94	X56	56,600	71,100	2,670	2,670	3,950
	0.500		XS	93.54	246.94	X60	60,200	75,400	2,840	2,840	4,190
	0.500		XS	93.54	246.94	X65	65,300	77,600	3,000	3,080	4,310
	0.500		XS	93.54	246.94	X70	70,300	82,700	3,000	3,320	4,590
	0.500		XS	93.54	246.94	X80	80,500	90,600	3,000	3,630	5,030

STANDARD PIPE & LINE PIPE TABLES

Outside Diameter NPS (inches)	Wall			Weight		Grade	Specified Minimum Strength (psi)		Mill Hydrostatic Test Pressure (psi)		Ultimate Burst (psi)
	Inches	Schedule Number	Class	lb/ft Plain End	Tons/ Mile		Yield	Tensile	Standard	Alternate	
OD 18.000											
NPS 18 OD 18.000 Seamless	0.562	40		104.76	276.58	B	35,500	60,200	1,330	1,660	3,760
	0.562	40		104.76	276.58	C	40,000	70,000	1,500		4,370
	0.562	40		104.76	276.58	X42	42,100	60,200	2,230	2,230	3,760
	0.562	40		104.76	276.58	X46	46,400	63,100	2,460	2,460	3,940
	0.562	40		104.76	276.58	X52	52,200	66,700	2,770	2,770	4,170
	0.562	40		104.76	276.58	X56	56,600	71,100	3,000	3,000	4,440
	0.562	40		104.76	276.58	X60	60,200	75,400	3,000	3,200	4,710
	0.562	40		104.76	276.58	X65	65,300	77,600	3,000	3,470	4,850
	0.562	40		104.76	276.58	X70	70,300	82,700	3,000	3,630	5,160
	0.562	40		104.76	276.58	X80	80,500	90,600	3,000	3,630	5,660
	0.625			116.09	306.47	B	35,500	60,200	1,480	1,850	4,180
	0.625			116.09	306.47	C	40,000	70,000	1,670		4,860
	0.625			116.09	306.47	X42	42,100	60,200	2,490	2,490	4,180
	0.625			116.09	306.47	X46	46,400	63,100	2,740	2,740	4,380
	0.625			116.09	306.47	X52	52,200	66,700	3,000	3,080	4,630
	0.625			116.09	306.47	X56	56,600	71,100	3,000	3,340	4,940
	0.625			116.09	306.47	X60	60,200	75,400	3,000	3,550	5,240
	0.625			116.09	306.47	X65	65,300	77,600	3,000	3,630	5,390
	0.625			116.09	306.47	X70	70,300	82,700	3,000	3,630	5,740
	0.625			116.09	306.47	X80	80,500	90,600	3,000	3,630	6,290
	0.688			127.32	336.14	B	35,500	60,200	1,630	2,040	4,600
	0.688			127.32	336.14	C	40,000	70,000	1,830		5,350
	0.688			127.32	336.14	X42	42,100	60,200	2,740	2,740	4,600
	0.688			127.32	336.14	X46	46,400	63,100	3,000	3,010	4,820
	0.688			127.32	336.14	X52	52,200	66,700	3,000	3,390	5,100
	0.688			127.32	336.14	X56	56,600	71,100	3,000	3,630	5,440
	0.688			127.32	336.14	X60	60,200	75,400	3,000	3,630	5,760
	0.688			127.32	336.14	X65	65,300	77,600	3,000	3,630	5,930
	0.688			127.32	336.14	X70	70,300	82,700	3,000	3,630	6,320
	0.688			127.32	336.14	X80	80,500	90,600	3,000	3,630	6,930
	0.750	60		138.30	365.12	B	35,500	60,200	1,780	2,220	5,020
	0.750	60		138.30	365.12	C	40,000	70,000	2,000		5,830
	0.750	60		138.30	365.12	X42	42,100	60,200	3,000	2,980	5,020
	0.750	60		138.30	365.12	X46	46,400	63,100	3,000	3,290	5,260
	0.750	60		138.30	365.12	X52	52,200	66,700	3,000	3,630	5,560
	0.750	60		138.30	365.12	X56	56,600	71,100	3,000	3,630	5,930
	0.750	60		138.30	365.12	X60	60,200	75,400	3,000	3,630	6,280
	0.750	60		138.30	365.12	X65	65,300	77,600	3,000	3,630	6,470
	0.750	60		138.30	365.12	X70	70,300	82,700	3,000	3,630	6,890
	0.750	60		138.30	365.12	X80	80,500	90,600	3,000	3,630	7,550
	0.812			149.20	393.88	B	35,500	60,200	1,920	2,400	5,430
	0.812			149.20	393.88	C	40,000	70,000	2,170		6,320
	0.812			149.20	393.88	X42	42,100	60,200	3,000	3,230	5,430
	0.812			149.20	393.88	X46	46,400	63,100	3,000	3,560	5,690

NOTE: This table is meant to be an abbreviated reference tool for the most common sizes and grades offered by U. S. Steel Tubular Products. To download a PDF version of the performance data or a complete listing, visit www.usstubular.com/connections/sl.

Outside Diameter NPS (inches)	Wall			Weight		Grade	Specified Minimum Strength (psi)		Mill Hydrostatic Test Pressure (psi)		Ultimate Burst (psi)
	Inches	Schedule Number	Class	lb/ft Plain End	Tons/ Mile		Yield	Tensile	Standard	Alternate	
OD 18.000											
NPS 18 OD 18.000 Seamless	0.812			149.20	393.88	X52	52,200	66,700	3,000	3,630	6,020
	0.812			149.20	393.88	X56	56,600	71,100	3,000	3,630	6,410
	0.812			149.20	393.88	X60	60,200	75,400	3,000	3,630	6,800
	0.812			149.20	393.88	X65	65,300	77,600	3,000	3,630	7,000
	0.812			149.20	393.88	X70	70,300	82,700	3,000	3,630	7,460
	0.812			149.20	393.88	X80	80,500	90,600	3,000	3,630	8,170
	0.938	80		171.08	451.66	B	35,500	60,200	2,220	2,800	6,270
	0.938	80		171.08	451.66	C	40,000	70,000	2,500		7,300
	0.938	80		171.08	451.66	X42	42,100	60,200	3,000	3,630	6,270
	0.938	80		171.08	451.66	X46	46,400	63,100	3,000	3,630	6,580
	0.938	80		171.08	451.66	X52	52,200	66,700	3,000	3,630	6,950
	0.938	80		171.08	451.66	X56	56,600	71,100	3,000	3,630	7,410
	0.938	80		171.08	451.66	X60	60,200	75,400	3,000	3,630	7,860
	0.938	80		171.08	451.66	X65	65,300	77,600	3,000	3,630	8,090
	0.938	80		171.08	451.66	X70	70,300	82,700	3,000	3,630	8,620
	0.938	80		171.08	451.66	X80	80,500	90,600	3,000	3,630	9,440
	1.000			181.73	479.77	B	35,500	60,200	2,370	2,800	6,690
	1.000			181.73	479.77	C	40,000	70,000	2,670		7,780
	1.000			181.73	479.77	X42	42,100	60,200	3,000	3,630	6,690
	1.000			181.73	479.77	X46	46,400	63,100	3,000	3,630	7,010
	1.000			181.73	479.77	X52	52,200	66,700	3,000	3,630	7,410
	1.000			181.73	479.77	X56	56,600	71,100	3,000	3,630	7,900
	1.000			181.73	479.77	X60	60,200	75,400	3,000	3,630	8,380
	1.000			181.73	479.77	X65	65,300	77,600	3,000	3,630	8,620
	1.000			181.73	479.77	X70	70,300	82,700	3,000	3,630	9,190
	1.000			181.73	479.77	X80	80,500	90,600	3,000	3,630	10,070
	1.156	100		208.15	549.52	B	35,500	60,200	2,740	2,800	7,730
	1.156	100		208.15	549.52	C	40,000	70,000	2,800		8,990
	1.156	100		208.15	549.52	X42	42,100	60,200	3,000	3,630	7,730
	1.156	100		208.15	549.52	X46	46,400	63,100	3,000	3,630	8,100
	1.156	100		208.15	549.52	X52	52,200	66,700	3,000	3,630	8,570
	1.156	100		208.15	549.52	X56	56,600	71,100	3,000	3,630	9,130
	1.156	100		208.15	549.52	X60	60,200	75,400	3,000	3,630	9,680
	1.156	100		208.15	549.52	X65	65,300	77,600	3,000	3,630	9,970
	1.156	100		208.15	549.52	X70	70,300	82,700	3,000	3,630	10,620
	1.156	100		208.15	549.52	X80	80,500	90,600	3,000	3,630	11,640
	1.375	120		244.37	645.13	B	35,500	60,200	2,800	2,800	9,200
	1.375	120		244.37	645.13	C	40,000	70,000	2,800		10,690
	1.375	120		244.37	645.13	X42	42,100	60,200	3,000	3,630	9,200
	1.375	120		244.37	645.13	X46	46,400	63,100	3,000	3,630	9,640
	1.375	120		244.37	645.13	X52	52,200	66,700	3,000	3,630	10,190
	1.375	120		244.37	645.13	X56	56,600	71,100	3,000	3,630	10,860
	1.375	120		244.37	645.13	X60	60,200	75,400	3,000	3,630	11,520
	1.375	120		244.37	645.13	X65	65,300	77,600	3,000	3,630	11,860

STANDARD PIPE & LINE PIPE TABLES

Outside Diameter NPS (inches)	Wall			Weight		Grade	Specified Minimum Strength (psi)		Mill Hydrostatic Test Pressure (psi)		Ultimate Burst (psi)
	Inches	Schedule Number	Class	lb/ft Plain End	Tons/ Mile		Yield	Tensile	Standard	Alternate	
OD 18.000											
NPS 18 OD 18.000 Seamless	1.375	120		244.37	645.13	X70	70,300	82,700	3,000	3,630	12,630
	1.375	120		244.37	645.13	X80	80,500	90,600	3,000	3,630	13,840
	1.562	140		274.48	724.62	B	35,500	60,200	2,800	2,800	10,450
	1.562	140		274.48	724.62	C	40,000	70,000	2,800		12,150
	1.562	140		274.48	724.62	X42	42,100	60,200	3,000	3,630	10,450
	1.562	140		274.48	724.62	X46	46,400	63,100	3,000	3,630	10,950
	1.562	140		274.48	724.62	X52	52,200	66,700	3,000	3,630	11,580
	1.562	140		274.48	724.62	X56	56,600	71,100	3,000	3,630	12,340
	1.562	140		274.48	724.62	X60	60,200	75,400	3,000	3,630	13,090
	1.562	140		274.48	724.62	X65	65,300	77,600	3,000	3,630	13,470
	1.562	140		274.48	724.62	X70	70,300	82,700	3,000	3,630	14,350
	1.562	140		274.48	724.62	X80	80,500	90,600	3,000	3,630	15,720
OD 20.000											
NPS 20 OD 20.000 Seamless	0.375	20	STD	78.67	207.69	B	35,500	60,200	800	1,000	2,260
	0.375	20	STD	78.67	207.69	C	40,000	70,000	900		2,630
	0.375	20	STD	78.67	207.69	X42	42,100	60,200	1,420	1,420	2,260
	0.375	20	STD	78.67	207.69	X46	46,400	63,100	1,570	1,570	2,370
	0.375	20	STD	78.67	207.69	X52	52,200	66,700	1,760	1,760	2,500
	0.375	20	STD	78.67	207.69	X56	56,600	71,100	1,910	1,910	2,670
	0.375	20	STD	78.67	207.69	X60	60,200	75,400	2,030	2,030	2,830
	0.375	20	STD	78.67	207.69	X65	65,300	77,600	2,200	2,200	2,910
	0.375	20	STD	78.67	207.69	X70	70,300	82,700	2,370	2,370	3,100
	0.375	20	STD	78.67	207.69	X80	80,500	90,600	2,720	2,720	3,400
	0.406			85.04	224.51	B	35,500	60,200	860	1,080	2,440
	0.406			85.04	224.51	C	40,000	70,000	970		2,840
	0.406			85.04	224.51	X42	42,100	60,200	1,540	1,540	2,440
	0.406			85.04	224.51	X46	46,400	63,100	1,700	1,700	2,560
	0.406			85.04	224.51	X52	52,200	66,700	1,910	1,910	2,710
	0.406			85.04	224.51	X56	56,600	71,100	2,070	2,070	2,890
	0.406			85.04	224.51	X60	60,200	75,400	2,200	2,200	3,060
	0.406			85.04	224.51	X65	65,300	77,600	2,390	2,390	3,150
	0.406			85.04	224.51	X70	70,300	82,700	2,570	2,570	3,360
	0.406			85.04	224.51	X80	80,500	90,600	2,940	2,940	3,680
	0.438			91.59	241.81	B	35,500	60,200	930	1,170	2,640
	0.438			91.59	241.81	C	40,000	70,000	1,050		3,070
	0.438			91.59	241.81	X42	42,100	60,200	1,660	1,660	2,640
	0.438			91.59	241.81	X46	46,400	63,100	1,830	1,830	2,760
	0.438			91.59	241.81	X52	52,200	66,700	2,060	2,060	2,920
	0.438			91.59	241.81	X56	56,600	71,100	2,230	2,230	3,110
	0.438			91.59	241.81	X60	60,200	75,400	2,370	2,370	3,300
	0.438			91.59	241.81	X65	65,300	77,600	2,570	2,570	3,400

NOTE: This table is meant to be an abbreviated reference tool for the most common sizes and grades offered by U. S. Steel Tubular Products. To download a PDF version of the performance data or a complete listing, visit www.usstubular.com/connections/sl.

Outside Diameter NPS (inches)	Wall			Weight		Grade	Specified Minimum Strength (psi)		Mill Hydrostatic Test Pressure (psi)		Ultimate Burst (psi)
	Inches	Schedule Number	Class	lb/ft Plain End	Tons/ Mile		Yield	Tensile	Standard	Alternate	
OD 20.000											
NPS 20 OD 20.000 Seamless	0.438			91.59	241.81	X70	70,300	82,700	2,770	2,770	3,620
	0.438			91.59	241.81	X80	80,500	90,600	3,000	3,170	3,970
	0.469			97.92	258.51	B	35,500	60,200	1,000	1,250	2,820
	0.469			97.92	258.51	C	40,000	70,000	1,130		3,280
	0.469			97.92	258.51	X42	42,100	60,200	1,780	1,780	2,820
	0.469			97.92	258.51	X46	46,400	63,100	1,960	1,960	2,960
	0.469			97.92	258.51	X52	52,200	66,700	2,200	2,200	3,130
	0.469			97.92	258.51	X56	56,600	71,100	2,390	2,390	3,330
	0.469			97.92	258.51	X60	60,200	75,400	2,540	2,540	3,540
	0.469			97.92	258.51	X65	65,300	77,600	2,760	2,760	3,640
	0.469			97.92	258.51	X70	70,300	82,700	2,970	2,970	3,880
	0.469			97.92	258.51	X80	80,500	90,600	3,000	3,400	4,250
	0.500	30	XS	104.23	275.16	B	35,500	60,200	1,070	1,330	3,010
	0.500	30	XS	104.23	275.16	C	40,000	70,000	1,200		3,500
	0.500	30	XS	104.23	275.16	X42	42,100	60,200	1,890	1,890	3,010
	0.500	30	XS	104.23	275.16	X46	46,400	63,100	2,090	2,090	3,160
	0.500	30	XS	104.23	275.16	X52	52,200	66,700	2,350	2,350	3,340
	0.500	30	XS	104.23	275.16	X56	56,600	71,100	2,550	2,550	3,560
	0.500	30	XS	104.23	275.16	X60	60,200	75,400	2,710	2,710	3,770
	0.500	30	XS	104.23	275.16	X65	65,300	77,600	2,940	2,940	3,880
	0.500	30	XS	104.23	275.16	X70	70,300	82,700	3,000	3,160	4,140
	0.500	30	XS	104.23	275.16	X80	80,500	90,600	3,000	3,620	4,530
	0.562			116.78	308.30	B	35,500	60,200	1,200	1,500	3,380
	0.562			116.78	308.30	C	40,000	70,000	1,350		3,930
	0.562			116.78	308.30	X42	42,100	60,200	2,130	2,130	3,380
	0.562			116.78	308.30	X46	46,400	63,100	2,350	2,350	3,550
	0.562			116.78	308.30	X52	52,200	66,700	2,640	2,640	3,750
	0.562			116.78	308.30	X56	56,600	71,100	2,860	2,860	4,000
	0.562			116.78	308.30	X60	60,200	75,400	3,000	3,040	4,240
	0.562			116.78	308.30	X65	65,300	77,600	3,000	3,300	4,360
	0.562			116.78	308.30	X70	70,300	82,700	3,000	3,560	4,650
	0.562			116.78	308.30	X80	80,500	90,600	3,000	3,630	5,090
	0.594	40		123.23	325.32	B	35,500	60,200	1,270	1,580	3,580
	0.594	40		123.23	325.32	C	40,000	70,000	1,430		4,160
	0.594	40		123.23	325.32	X42	42,100	60,200	2,250	2,250	3,580
	0.594	40		123.23	325.32	X46	46,400	63,100	2,480	2,480	3,750
	0.594	40		123.23	325.32	X52	52,200	66,700	2,790	2,790	3,960
	0.594	40		123.23	325.32	X56	56,600	71,100	3,000	3,030	4,220
	0.594	40		123.23	325.32	X60	60,200	75,400	3,000	3,220	4,480
	0.594	40		123.23	325.32	X65	65,300	77,600	3,000	3,490	4,610
	0.594	40		123.23	325.32	X70	70,300	82,700	3,000	3,630	4,910
	0.594	40		123.23	325.32	X80	80,500	90,600	3,000	3,630	5,380

STANDARD PIPE & LINE PIPE TABLES

Outside Diameter NPS (inches)	Wall			Weight		Grade	Specified Minimum Strength (psi)		Mill Hydrostatic Test Pressure (psi)		Ultimate Burst (psi)
	Inches	Schedule Number	Class	lb/ft Plain End	Tons/ Mile		Yield	Tensile	Standard	Alternate	
OD 20.000											
NPS 20 OD 20.000 Seamless	0.625			129.45	341.75	B	35,500	60,200	1,330	1,660	3,760
	0.625			129.45	341.75	C	40,000	70,000	1,500		4,380
	0.625			129.45	341.75	X42	42,100	60,200	2,370	2,370	3,760
	0.625			129.45	341.75	X46	46,400	63,100	2,610	2,610	3,940
	0.625			129.45	341.75	X52	52,200	66,700	2,940	2,940	4,170
	0.625			129.45	341.75	X56	56,600	71,100	3,000	3,180	4,440
	0.625			129.45	341.75	X60	60,200	75,400	3,000	3,390	4,710
	0.625			129.45	341.75	X65	65,300	77,600	3,000	3,630	4,850
	0.625			129.45	341.75	X70	70,300	82,700	3,000	3,630	5,170
	0.625			129.45	341.75	X80	80,500	90,600	3,000	3,630	5,660
	0.688			142.03	374.97	B	35,500	60,200	1,470	1,830	4,140
	0.688			142.03	374.97	C	40,000	70,000	1,650		4,820
	0.688			142.03	374.97	X42	42,100	60,200	2,610	2,610	4,140
	0.688			142.03	374.97	X46	46,400	63,100	2,870	2,870	4,340
	0.688			142.03	374.97	X52	52,200	66,700	3,000	3,230	4,590
	0.688			142.03	374.97	X56	56,600	71,100	3,000	3,500	4,890
	0.688			142.03	374.97	X60	60,200	75,400	3,000	3,630	5,190
	0.688			142.03	374.97	X65	65,300	77,600	3,000	3,630	5,340
	0.688			142.03	374.97	X70	70,300	82,700	3,000	3,630	5,690
	0.688			142.03	374.97	X80	80,500	90,600	3,000	3,630	6,230
	0.750			154.34	407.45	B	35,500	60,200	1,600	2,000	4,520
	0.750			154.34	407.45	C	40,000	70,000	1,800		5,250
	0.750			154.34	407.45	X42	42,100	60,200	2,840	2,840	4,520
	0.750			154.34	407.45	X46	46,400	63,100	3,000	3,130	4,730
	0.750			154.34	407.45	X52	52,200	66,700	3,000	3,520	5,000
	0.750			154.34	407.45	X56	56,600	71,100	3,000	3,630	5,330
	0.750			154.34	407.45	X60	60,200	75,400	3,000	3,630	5,660
	0.750			154.34	407.45	X65	65,300	77,600	3,000	3,630	5,820
	0.750			154.34	407.45	X70	70,300	82,700	3,000	3,630	6,200
	0.750			154.34	407.45	X80	80,500	90,600	3,000	3,630	6,800
	0.812	60		166.56	439.71	B	35,500	60,200	1,730	2,160	4,890
	0.812	60		166.56	439.71	C	40,000	70,000	1,950		5,680
	0.812	60		166.56	439.71	X42	42,100	60,200	3,000	3,080	4,890
	0.812	60		166.56	439.71	X46	46,400	63,100	3,000	3,390	5,120
	0.812	60		166.56	439.71	X52	52,200	66,700	3,000	3,630	5,420
	0.812	60		166.56	439.71	X56	56,600	71,100	3,000	3,630	5,770
	0.812	60		166.56	439.71	X60	60,200	75,400	3,000	3,630	6,120
	0.812	60		166.56	439.71	X65	65,300	77,600	3,000	3,630	6,300
	0.812	60		166.56	439.71	X70	70,300	82,700	3,000	3,630	6,720
	0.812	60		166.56	439.71	X80	80,500	90,600	3,000	3,630	7,360

NOTE: This table is meant to be an abbreviated reference tool for the most common sizes and grades offered by U. S. Steel Tubular Products. To download a PDF version of the performance data or a complete listing, visit www.usstubular.com/connections/sl.

Outside Diameter NPS (inches)	Wall			Weight		Grade	Specified Minimum Strength (psi)		Mill Hydrostatic Test Pressure (psi)		Ultimate Burst (psi)
	Inches	Schedule Number	Class	lb/ft Plain End	Tons/ Mile		Yield	Tensile	Standard	Alternate	
OD 20.000											
NPS 20 OD 20.000 Seamless	1.031	80		209.06	551.93	B	35,500	60,200	2,200	2,750	6,210
	1.031	80		209.06	551.93	C	40,000	70,000	2,470		7,220
	1.031	80		209.06	551.93	X42	42,100	60,200	3,000	3,630	6,210
	1.031	80		209.06	551.93	X46	46,400	63,100	3,000	3,630	6,510
	1.031	80		209.06	551.93	X52	52,200	66,700	3,000	3,630	6,880
	1.031	80		209.06	551.93	X56	56,600	71,100	3,000	3,630	7,330
	1.031	80		209.06	551.93	X60	60,200	75,400	3,000	3,630	7,770
	1.031	80		209.06	551.93	X65	65,300	77,600	3,000	3,630	8,000
	1.031	80		209.06	551.93	X70	70,300	82,700	3,000	3,630	8,530
	1.031	80		209.06	551.93	X80	80,500	90,600	3,000	3,630	9,340
	1.250			250.55	661.44	B	35,500	60,200	2,660	2,800	7,530
	1.250			250.55	661.44	C	40,000	70,000	2,800		8,750
	1.250			250.55	661.44	X42	42,100	60,200	3,000	3,630	7,530
	1.250			250.55	661.44	X46	46,400	63,100	3,000	3,630	7,890
	1.250			250.55	661.44	X52	52,200	66,700	3,000	3,630	8,340
	1.250			250.55	661.44	X56	56,600	71,100	3,000	3,630	8,890
	1.250			250.55	661.44	X60	60,200	75,400	3,000	3,630	9,430
	1.250			250.55	661.44	X65	65,300	77,600	3,000	3,630	9,700
	1.250			250.55	661.44	X70	70,300	82,700	3,000	3,630	10,340
	1.250			250.55	661.44	X80	80,500	90,600	3,000	3,630	11,330
	1.281	100		256.34	676.73	B	35,500	60,200	2,730	2,800	7,710
	1.281	100		256.34	676.73	C	40,000	70,000	2,800		8,970
	1.281	100		256.34	676.73	X42	42,100	60,200	3,000	3,630	7,710
	1.281	100		256.34	676.73	X46	46,400	63,100	3,000	3,630	8,080
	1.281	100		256.34	676.73	X52	52,200	66,700	3,000	3,630	8,540
	1.281	100		256.34	676.73	X56	56,600	71,100	3,000	3,630	9,110
	1.281	100		256.34	676.73	X60	60,200	75,400	3,000	3,630	9,660
	1.281	100		256.34	676.73	X65	65,300	77,600	3,000	3,630	9,940
	1.281	100		256.34	676.73	X70	70,300	82,700	3,000	3,630	10,590
	1.281	100		256.34	676.73	X80	80,500	90,600	3,000	3,630	11,610
	1.375			273.76	722.74	B	35,500	60,200	2,800	2,800	8,280
	1.375			273.76	722.74	C	40,000	70,000	2,800		9,630
	1.375			273.76	722.74	X42	42,100	60,200	3,000	3,630	8,280
	1.375			273.76	722.74	X46	46,400	63,100	3,000	3,630	8,680
	1.375			273.76	722.74	X52	52,200	66,700	3,000	3,630	9,170
	1.375			273.76	722.74	X56	56,600	71,100	3,000	3,630	9,780
	1.375			273.76	722.74	X60	60,200	75,400	3,000	3,630	10,370
	1.375			273.76	722.74	X65	65,300	77,600	3,000	3,630	10,670
	1.375			273.76	722.74	X70	70,300	82,700	3,000	3,630	11,370
	1.375			273.76	722.74	X80	80,500	90,600	3,000	3,630	12,460

STANDARD PIPE & LINE PIPE TABLES

Outside Diameter NPS (inches)	Wall			Weight		Grade	Specified Minimum Strength (psi)		Mill Hydrostatic Test Pressure (psi)		Ultimate Burst (psi)
	Inches	Schedule Number	Class	lb/ft Plain End	Tons/ Mile		Yield	Tensile	Standard	Alternate	
OD 20.000											
NPS 20 OD 20.000 Seamless	1.500			296.65	783.15	B	35,500	60,200	2,800	2,800	9,030
	1.500			296.65	783.15	C	40,000	70,000	2,800		10,500
	1.500			296.65	783.15	X42	42,100	60,200	3,000	3,630	9,030
	1.500			296.65	783.15	X46	46,400	63,100	3,000	3,630	9,470
	1.500			296.65	783.15	X52	52,200	66,700	3,000	3,630	10,010
	1.500			296.65	783.15	X56	56,600	71,100	3,000	3,630	10,670
	1.500			296.65	783.15	X60	60,200	75,400	3,000	3,630	11,310
	1.500			296.65	783.15	X65	65,300	77,600	3,000	3,630	11,640
	1.500			296.65	783.15	X70	70,300	82,700	3,000	3,630	12,410
	1.500			296.65	783.15	X80	80,500	90,600	3,000	3,630	13,590
OD 22.000											
NPS 22 OD 22.000 Seamless	0.375	20	STD	86.69	228.86	B	35,500	60,200	730	910	2,050
	0.375	20	STD	86.69	228.86	C	40,000	70,000	820		2,390
	0.375	20	STD	86.69	228.86	X42	42,100	60,200	1,290	1,290	2,050
	0.375	20	STD	86.69	228.86	X46	46,400	63,100	1,420	1,420	2,150
	0.375	20	STD	86.69	228.86	X52	52,200	66,700	1,600	1,600	2,270
	0.375	20	STD	86.69	228.86	X56	56,600	71,100	1,740	1,740	2,420
	0.375	20	STD	86.69	228.86	X60	60,200	75,400	1,850	1,850	2,570
	0.375	20	STD	86.69	228.86	X65	65,300	77,600	2,000	2,000	2,650
	0.375	20	STD	86.69	228.86	X70	70,300	82,700	2,160	2,160	2,820
	0.375	20	STD	86.69	228.86	X80	80,500	90,600	2,470	2,470	3,090
	0.406			93.72	247.42	B	35,500	60,200	790	980	2,220
	0.406			93.72	247.42	C	40,000	70,000	890		2,580
	0.406			93.72	247.42	X42	42,100	60,200	1,400	1,400	2,220
	0.406			93.72	247.42	X46	46,400	63,100	1,540	1,540	2,330
	0.406			93.72	247.42	X52	52,200	66,700	1,730	1,730	2,460
	0.406			93.72	247.42	X56	56,600	71,100	1,880	1,880	2,620
	0.406			93.72	247.42	X60	60,200	75,400	2,000	2,000	2,780
	0.406			93.72	247.42	X65	65,300	77,600	2,170	2,170	2,860
	0.406			93.72	247.42	X70	70,300	82,700	2,340	2,340	3,050
	0.406			93.72	247.42	X80	80,500	90,600	2,670	2,670	3,340
	0.438			100.96	266.53	B	35,500	60,200	850	1,060	2,400
	0.438			100.96	266.53	C	40,000	70,000	960		2,790
	0.438			100.96	266.53	X42	42,100	60,200	1,510	1,510	2,400
	0.438			100.96	266.53	X46	46,400	63,100	1,660	1,660	2,510
	0.438			100.96	266.53	X52	52,200	66,700	1,870	1,870	2,660
	0.438			100.96	266.53	X56	56,600	71,100	2,030	2,030	2,830
	0.438			100.96	266.53	X60	60,200	75,400	2,160	2,160	3,000
	0.438			100.96	266.53	X65	65,300	77,600	2,340	2,340	3,090
	0.438			100.96	266.53	X70	70,300	82,700	2,520	2,520	3,290
	0.438			100.96	266.53	X80	80,500	90,600	2,880	2,880	3,610

NOTE: This table is meant to be an abbreviated reference tool for the most common sizes and grades offered by U. S. Steel Tubular Products. To download a PDF version of the performance data or a complete listing, visit www.usstubular.com/connections/sl.

Outside Diameter NPS (inches)	Wall			Weight		Grade	Specified Minimum Strength (psi)		Mill Hydrostatic Test Pressure (psi)		Ultimate Burst (psi)
	Inches	Schedule Number	Class	lb/ft Plain End	Tons/ Mile		Yield	Tensile	Standard	Alternate	
OD 22.000											
NPS 22 OD 22.000 Seamless	0.469			107.95	284.98	B	35,500	60,200	910	1,140	2,570
	0.469			107.95	284.98	C	40,000	70,000	1,020		2,980
	0.469			107.95	284.98	X42	42,100	60,200	1,620	1,620	2,570
	0.469			107.95	284.98	X46	46,400	63,100	1,780	1,780	2,690
	0.469			107.95	284.98	X52	52,200	66,700	2,000	2,000	2,840
	0.469			107.95	284.98	X56	56,600	71,100	2,170	2,170	3,030
	0.469			107.95	284.98	X60	60,200	75,400	2,310	2,310	3,210
	0.469			107.95	284.98	X65	65,300	77,600	2,510	2,510	3,310
	0.469			107.95	284.98	X70	70,300	82,700	2,700	2,700	3,530
	0.469			107.95	284.98	X80	80,500	90,600	3,000	3,090	3,860
	0.500	30	XS	114.92	303.38	B	35,500	60,200	970	1,210	2,740
	0.500	30	XS	114.92	303.38	C	40,000	70,000	1,090		3,180
	0.500	30	XS	114.92	303.38	X42	42,100	60,200	1,720	1,720	2,740
	0.500	30	XS	114.92	303.38	X46	46,400	63,100	1,900	1,900	2,870
	0.500	30	XS	114.92	303.38	X52	52,200	66,700	2,140	2,140	3,030
	0.500	30	XS	114.92	303.38	X56	56,600	71,100	2,320	2,320	3,230
	0.500	30	XS	114.92	303.38	X60	60,200	75,400	2,460	2,460	3,430
	0.500	30	XS	114.92	303.38	X65	65,300	77,600	2,670	2,670	3,530
	0.500	30	XS	114.92	303.38	X70	70,300	82,700	2,880	2,880	3,760
	0.500	30	XS	114.92	303.38	X80	80,500	90,600	3,000	3,290	4,120
	0.562			128.79	340.02	B	35,500	60,200	1,090	1,360	3,080
	0.562			128.79	340.02	C	40,000	70,000	1,230		3,580
	0.562			128.79	340.02	X42	42,100	60,200	1,940	1,940	3,080
	0.562			128.79	340.02	X46	46,400	63,100	2,130	2,130	3,220
	0.562			128.79	340.02	X52	52,200	66,700	2,400	2,400	3,410
	0.562			128.79	340.02	X56	56,600	71,100	2,600	2,600	3,630
	0.562			128.79	340.02	X60	60,200	75,400	2,770	2,770	3,850
	0.562			128.79	340.02	X65	65,300	77,600	3,000	3,000	3,960
	0.562			128.79	340.02	X70	70,300	82,700	3,000	3,230	4,230
	0.562			128.79	340.02	X80	80,500	90,600	3,000	3,630	4,630
	0.625			142.81	377.02	B	35,500	60,200	1,210	1,510	3,420
	0.625			142.81	377.02	C	40,000	70,000	1,360		3,980
	0.625			142.81	377.02	X42	42,100	60,200	2,150	2,150	3,420
	0.625			142.81	377.02	X46	46,400	63,100	2,370	2,370	3,590
	0.625			142.81	377.02	X52	52,200	66,700	2,670	2,670	3,790
	0.625			142.81	377.02	X56	56,600	71,100	2,890	2,890	4,040
	0.625			142.81	377.02	X60	60,200	75,400	3,000	3,080	4,280
	0.625			142.81	377.02	X65	65,300	77,600	3,000	3,340	4,410
	0.625			142.81	377.02	X70	70,300	82,700	3,000	3,590	4,700
	0.625			142.81	377.02	X80	80,500	90,600	3,000	3,630	5,150

STANDARD PIPE & LINE PIPE TABLES

Outside Diameter NPS (inches)	Wall			Weight		Grade	Specified Minimum Strength (psi)		Mill Hydrostatic Test Pressure (psi)		Ultimate Burst (psi)
	Inches	Schedule Number	Class	lb/ft Plain End	Tons/ Mile		Yield	Tensile	Standard	Alternate	
OD 22.000											
NPS 22 OD 22.000 Seamless	0.688			156.74	413.80	B	35,500	60,200	1,330	1,670	3,770
	0.688			156.74	413.80	C	40,000	70,000	1,500		4,380
	0.688			156.74	413.80	X42	42,100	60,200	2,370	2,370	3,770
	0.688			156.74	413.80	X46	46,400	63,100	2,610	2,610	3,950
	0.688			156.74	413.80	X52	52,200	66,700	2,940	2,940	4,170
	0.688			156.74	413.80	X56	56,600	71,100	3,000	3,190	4,450
	0.688			156.74	413.80	X60	60,200	75,400	3,000	3,390	4,720
	0.688			156.74	413.80	X65	65,300	77,600	3,000	3,630	4,850
	0.688			156.74	413.80	X70	70,300	82,700	3,000	3,630	5,170
	0.688			156.74	413.80	X80	80,500	90,600	3,000	3,630	5,670
	0.750			170.37	449.78	B	35,500	60,200	1,450	1,820	4,100
	0.750			170.37	449.78	C	40,000	70,000	1,640		4,770
	0.750			170.37	449.78	X42	42,100	60,200	2,580	2,580	4,100
	0.750			170.37	449.78	X46	46,400	63,100	2,850	2,850	4,300
	0.750			170.37	449.78	X52	52,200	66,700	3,000	3,200	4,550
	0.750			170.37	449.78	X56	56,600	71,100	3,000	3,470	4,850
	0.750			170.37	449.78	X60	60,200	75,400	3,000	3,630	5,140
	0.750			170.37	449.78	X65	65,300	77,600	3,000	3,630	5,290
	0.750			170.37	449.78	X70	70,300	82,700	3,000	3,630	5,640
	0.750			170.37	449.78	X80	80,500	90,600	3,000	3,630	6,180
	0.812			183.92	485.54	B	35,500	60,200	1,570	1,970	4,440
	0.812			183.92	485.54	C	40,000	70,000	1,770		5,170
	0.812			183.92	485.54	X42	42,100	60,200	2,800	2,800	4,440
	0.812			183.92	485.54	X46	46,400	63,100	3,000	3,080	4,660
	0.812			183.92	485.54	X52	52,200	66,700	3,000	3,470	4,920
	0.812			183.92	485.54	X56	56,600	71,100	3,000	3,630	5,250
	0.812			183.92	485.54	X60	60,200	75,400	3,000	3,630	5,570
	0.812			183.92	485.54	X65	65,300	77,600	3,000	3,630	5,730
	0.812			183.92	485.54	X70	70,300	82,700	3,000	3,630	6,100
	0.812			183.92	485.54	X80	80,500	90,600	3,000	3,630	6,690
	0.875	60		197.60	521.66	B	35,500	60,200	1,690	2,120	4,790
	0.875	60		197.60	521.66	C	40,000	70,000	1,910		5,570
	0.875	60		197.60	521.66	X42	42,100	60,200	3,000	3,010	4,790
	0.875	60		197.60	521.66	X46	46,400	63,100	3,000	3,320	5,020
	0.875	60		197.60	521.66	X52	52,200	66,700	3,000	3,630	5,310
	0.875	60		197.60	521.66	X56	56,600	71,100	3,000	3,630	5,660
	0.875	60		197.60	521.66	X60	60,200	75,400	3,000	3,630	6,000
	0.875	60		197.60	521.66	X65	65,300	77,600	3,000	3,630	6,170
	0.875	60		197.60	521.66	X70	70,300	82,700	3,000	3,630	6,580
	0.875	60		197.60	521.66	X80	80,500	90,600	3,000	3,630	7,210

NOTE: This table is meant to be an abbreviated reference tool for the most common sizes and grades offered by U. S. Steel Tubular Products. To download a PDF version of the performance data or a complete listing, visit www.usstubular.com/connections/sl.

Outside Diameter NPS (inches)	Wall			Weight		Grade	Specified Minimum Strength (psi)		Mill Hydrostatic Test Pressure (psi)		Ultimate Burst (psi)
	Inches	Schedule Number	Class	lb/ft Plain End	Tons/ Mile		Yield	Tensile	Standard	Alternate	
OD 22.000											
NPS 22 OD 22.000 Seamless	1.000			224.49	592.65	B	35,500	60,200	1,940	2,420	5,470
	1.000			224.49	592.65	C	40,000	70,000	2,180		6,360
	1.000			224.49	592.65	X42	42,100	60,200	3,000	3,440	5,470
	1.000			224.49	592.65	X46	46,400	63,100	3,000	3,630	5,740
	1.000			224.49	592.65	X52	52,200	66,700	3,000	3,630	6,060
	1.000			224.49	592.65	X56	56,600	71,100	3,000	3,630	6,460
	1.000			224.49	592.65	X60	60,200	75,400	3,000	3,630	6,850
	1.000			224.49	592.65	X65	65,300	77,600	3,000	3,630	7,050
	1.000			224.49	592.65	X70	70,300	82,700	3,000	3,630	7,520
	1.000			224.49	592.65	X80	80,500	90,600	3,000	3,630	8,240
	1.125	80		251.05	662.77	B	35,500	60,200	2,180	2,720	6,160
	1.125	80		251.05	662.77	C	40,000	70,000	2,450		7,160
	1.125	80		251.05	662.77	X42	42,100	60,200	3,000	3,630	6,160
	1.125	80		251.05	662.77	X46	46,400	63,100	3,000	3,630	6,450
	1.125	80		251.05	662.77	X52	52,200	66,700	3,000	3,630	6,820
	1.125	80		251.05	662.77	X56	56,600	71,100	3,000	3,630	7,270
	1.125	80		251.05	662.77	X60	60,200	75,400	3,000	3,630	7,710
	1.125	80		251.05	662.77	X65	65,300	77,600	3,000	3,630	7,940
	1.125	80		251.05	662.77	X70	70,300	82,700	3,000	3,630	8,460
	1.125	80		251.05	662.77	X80	80,500	90,600	3,000	3,630	9,270
	1.219			270.80	714.91	B	35,500	60,200	2,360	2,800	6,670
	1.219			270.80	714.91	C	40,000	70,000	2,660		7,760
	1.219			270.80	714.91	X42	42,100	60,200	3,000	3,630	6,670
	1.219			270.80	714.91	X46	46,400	63,100	3,000	3,630	6,990
	1.219			270.80	714.91	X52	52,200	66,700	3,000	3,630	7,390
	1.219			270.80	714.91	X56	56,600	71,100	3,000	3,630	7,880
	1.219			270.80	714.91	X60	60,200	75,400	3,000	3,630	8,360
	1.219			270.80	714.91	X65	65,300	77,600	3,000	3,630	8,600
	1.219			270.80	714.91	X70	70,300	82,700	3,000	3,630	9,160
	1.219			270.80	714.91	X80	80,500	90,600	3,000	3,630	10,040
	1.250			277.27	732.00	B	35,500	60,200	2,420	2,800	6,840
	1.250			277.27	732.00	C	40,000	70,000	2,730		7,950
	1.250			277.27	732.00	X42	42,100	60,200	3,000	3,630	6,840
	1.250			277.27	732.00	X46	46,400	63,100	3,000	3,630	7,170
	1.250			277.27	732.00	X52	52,200	66,700	3,000	3,630	7,580
	1.250			277.27	732.00	X56	56,600	71,100	3,000	3,630	8,080
	1.250			277.27	732.00	X60	60,200	75,400	3,000	3,630	8,570
	1.250			277.27	732.00	X65	65,300	77,600	3,000	3,630	8,820
	1.250			277.27	732.00	X70	70,300	82,700	3,000	3,630	9,400
	1.250			277.27	732.00	X80	80,500	90,600	3,000	3,630	10,300

STANDARD PIPE & LINE PIPE TABLES

Outside Diameter NPS (inches)	Wall			Weight		Grade	Specified Minimum Strength (psi)		Mill Hydrostatic Test Pressure (psi)		Ultimate Burst (psi)
	Inches	Schedule Number	Class	lb/ft Plain End	Tons/ Mile		Yield	Tensile	Standard	Alternate	
OD 24.000											
NPS 24 OD 24.000 Seamless	0.375	20	STD	94.71	250.03	B	35,500	60,200	670	830	1,880
	0.375	20	STD	94.71	250.03	C	40,000	70,000	750		2,190
	0.375	20	STD	94.71	250.03	X42	42,100	60,200	1,180	1,180	1,880
	0.375	20	STD	94.71	250.03	X46	46,400	63,100	1,310	1,310	1,970
	0.375	20	STD	94.71	250.03	X52	52,200	66,700	1,470	1,470	2,080
	0.375	20	STD	94.71	250.03	X56	56,600	71,100	1,590	1,590	2,220
	0.375	20	STD	94.71	250.03	X60	60,200	75,400	1,690	1,690	2,360
	0.375	20	STD	94.71	250.03	X65	65,300	77,600	1,840	1,840	2,430
	0.375	20	STD	94.71	250.03	X70	70,300	82,700	1,980	1,980	2,580
	0.375	20	STD	94.71	250.03	X80	80,500	90,600	2,260	2,260	2,830
	0.406			102.40	270.34	B	35,500	60,200	720	900	2,040
	0.406			102.40	270.34	C	40,000	70,000	810		2,370
	0.406			102.40	270.34	X42	42,100	60,200	1,280	1,280	2,040
	0.406			102.40	270.34	X46	46,400	63,100	1,410	1,410	2,130
	0.406			102.40	270.34	X52	52,200	66,700	1,590	1,590	2,260
	0.406			102.40	270.34	X56	56,600	71,100	1,720	1,720	2,410
	0.406			102.40	270.34	X60	60,200	75,400	1,830	1,830	2,550
	0.406			102.40	270.34	X65	65,300	77,600	1,990	1,990	2,630
	0.406			102.40	270.34	X70	70,300	82,700	2,140	2,140	2,800
	0.406			102.40	270.34	X80	80,500	90,600	2,450	2,450	3,070
	0.438			110.32	291.25	B	35,500	60,200	780	970	2,200
	0.438			110.32	291.25	C	40,000	70,000	880		2,560
	0.438			110.32	291.25	X42	42,100	60,200	1,380	1,380	2,200
	0.438			110.32	291.25	X46	46,400	63,100	1,520	1,520	2,300
	0.438			110.32	291.25	X52	52,200	66,700	1,710	1,710	2,430
	0.438			110.32	291.25	X56	56,600	71,100	1,860	1,860	2,600
	0.438			110.32	291.25	X60	60,200	75,400	1,980	1,980	2,750
	0.438			110.32	291.25	X65	65,300	77,600	2,150	2,150	2,830
	0.438			110.32	291.25	X70	70,300	82,700	2,310	2,310	3,020
	0.438			110.32	291.25	X80	80,500	90,600	2,640	2,640	3,310
	0.469			117.98	311.45	B	35,500	60,200	830	1,040	2,350
	0.469			117.98	311.45	C	40,000	70,000	940		2,740
	0.469			117.98	311.45	X42	42,100	60,200	1,480	1,480	2,350
	0.469			117.98	311.45	X46	46,400	63,100	1,630	1,630	2,470
	0.469			117.98	311.45	X52	52,200	66,700	1,840	1,840	2,610
	0.469			117.98	311.45	X56	56,600	71,100	1,990	1,990	2,780
	0.469			117.98	311.45	X60	60,200	75,400	2,120	2,120	2,950
	0.469			117.98	311.45	X65	65,300	77,600	2,300	2,300	3,030
	0.469			117.98	311.45	X70	70,300	82,700	2,470	2,470	3,230
	0.469			117.98	311.45	X80	80,500	90,600	2,830	2,830	3,540
	0.500		XS	125.61	331.60	B	35,500	60,200	890	1,110	2,510
	0.500		XS	125.61	331.60	C	40,000	70,000	1,000		2,920
	0.500		XS	125.61	331.60	X42	42,100	60,200	1,580	1,580	2,510

NOTE: This table is meant to be an abbreviated reference tool for the most common sizes and grades offered by U. S. Steel Tubular Products. To download a PDF version of the performance data or a complete listing, visit www.usstubular.com/connections/sl.

Outside Diameter NPS (inches)	Wall			Weight		Grade	Specified Minimum Strength (psi)		Mill Hydrostatic Test Pressure (psi)		Ultimate Burst (psi)
	Inches	Schedule Number	Class	lb/ft Plain End	Tons/ Mile		Yield	Tensile	Standard	Alternate	
OD 24.000											
NPS 24 OD 24.000 Seamless	0.500		XS	125.61	331.60	X46	46,400	63,100	1,740	1,740	2,630
	0.500		XS	125.61	331.60	X52	52,200	66,700	1,960	1,960	2,780
	0.500		XS	125.61	331.60	X56	56,600	71,100	2,120	2,120	2,960
	0.500		XS	125.61	331.60	X60	60,200	75,400	2,260	2,260	3,140
	0.500		XS	125.61	331.60	X65	65,300	77,600	2,450	2,450	3,230
	0.500		XS	125.61	331.60	X70	70,300	82,700	2,640	2,640	3,450
	0.500		XS	125.61	331.60	X80	80,500	90,600	3,000	3,020	3,780
	0.562	30		140.81	371.74	B	35,500	60,200	1,000	1,250	2,820
	0.562	30		140.81	371.74	C	40,000	70,000	1,120		3,280
	0.562	30		140.81	371.74	X42	42,100	60,200	1,770	1,770	2,820
	0.562	30		140.81	371.74	X46	46,400	63,100	1,960	1,960	2,960
	0.562	30		140.81	371.74	X52	52,200	66,700	2,200	2,200	3,120
	0.562	30		140.81	371.74	X56	56,600	71,100	2,390	2,390	3,330
	0.562	30		140.81	371.74	X60	60,200	75,400	2,540	2,540	3,530
	0.562	30		140.81	371.74	X65	65,300	77,600	2,750	2,750	3,630
	0.562	30		140.81	371.74	X70	70,300	82,700	2,960	2,960	3,870
	0.562	30		140.81	371.74	X80	80,500	90,600	3,000	3,390	4,240
	0.625			156.17	412.30	B	35,500	60,200	1,110	1,390	3,140
	0.625			156.17	412.30	C	40,000	70,000	1,250		3,650
	0.625			156.17	412.30	X42	42,100	60,200	1,970	1,970	3,140
	0.625			156.17	412.30	X46	46,400	63,100	2,180	2,180	3,290
	0.625			156.17	412.30	X52	52,200	66,700	2,450	2,450	3,470
	0.625			156.17	412.30	X56	56,600	71,100	2,650	2,650	3,700
	0.625			156.17	412.30	X60	60,200	75,400	2,820	2,820	3,930
	0.625			156.17	412.30	X65	65,300	77,600	3,000	3,060	4,040
	0.625			156.17	412.30	X70	70,300	82,700	3,000	3,300	4,310
	0.625			156.17	412.30	X80	80,500	90,600	3,000	3,630	4,720
	0.688	40		171.45	452.64	B	35,500	60,200	1,220	1,530	3,450
	0.688	40		171.45	452.64	C	40,000	70,000	1,380		4,010
	0.688	40		171.45	452.64	X42	42,100	60,200	2,170	2,170	3,450
	0.688	40		171.45	452.64	X46	46,400	63,100	2,390	2,390	3,620
	0.688	40		171.45	452.64	X52	52,200	66,700	2,690	2,690	3,820
	0.688	40		171.45	452.64	X56	56,600	71,100	2,920	2,920	4,080
	0.688	40		171.45	452.64	X60	60,200	75,400	3,000	3,110	4,320
	0.688	40		171.45	452.64	X65	65,300	77,600	3,000	3,370	4,450
	0.688	40		171.45	452.64	X70	70,300	82,700	3,000	3,630	4,740
	0.688	40		171.45	452.64	X80	80,500	90,600	3,000	3,630	5,190
	0.750			186.41	492.11	B	35,500	60,200	1,330	1,660	3,760
	0.750			186.41	492.11	C	40,000	70,000	1,500		4,380
	0.750			186.41	492.11	X42	42,100	60,200	2,370	2,370	3,760
	0.750			186.41	492.11	X46	46,400	63,100	2,610	2,610	3,940
	0.750			186.41	492.11	X52	52,200	66,700	2,940	2,940	4,170

STANDARD PIPE & LINE PIPE TABLES

Outside Diameter NPS (inches)	Wall			Weight		Grade	Specified Minimum Strength (psi)		Mill Hydrostatic Test Pressure (psi)		Ultimate Burst (psi)
	Inches	Schedule Number	Class	lb/ft Plain End	Tons/ Mile		Yield	Tensile	Standard	Alternate	
OD 24.000											
NPS 24 OD 24.000 Seamless	0.750			186.41	492.11	X56	56,600	71,100	3,000	3,180	4,440
	0.750			186.41	492.11	X60	60,200	75,400	3,000	3,390	4,710
	0.750			186.41	492.11	X65	65,300	77,600	3,000	3,630	4,850
	0.750			186.41	492.11	X70	70,300	82,700	3,000	3,630	5,170
	0.750			186.41	492.11	X80	80,500	90,600	3,000	3,630	5,660
	0.812			201.28	531.37	B	35,500	60,200	1,440	1,800	4,070
	0.812			201.28	531.37	C	40,000	70,000	1,620		4,740
	0.812			201.28	531.37	X42	42,100	60,200	2,560	2,560	4,070
	0.812			201.28	531.37	X46	46,400	63,100	2,830	2,830	4,270
	0.812			201.28	531.37	X52	52,200	66,700	3,000	3,180	4,510
	0.812			201.28	531.37	X56	56,600	71,100	3,000	3,450	4,810
	0.812			201.28	531.37	X60	60,200	75,400	3,000	3,630	5,100
	0.812			201.28	531.37	X65	65,300	77,600	3,000	3,630	5,250
	0.812			201.28	531.37	X70	70,300	82,700	3,000	3,630	5,600
	0.812			201.28	531.37	X80	80,500	90,600	3,000	3,630	6,130
	0.875			216.31	571.05	B	35,500	60,200	1,550	1,940	4,390
	0.875			216.31	571.05	C	40,000	70,000	1,750		5,100
	0.875			216.31	571.05	X42	42,100	60,200	2,760	2,760	4,390
	0.875			216.31	571.05	X46	46,400	63,100	3,000	3,050	4,600
	0.875			216.31	571.05	X52	52,200	66,700	3,000	3,430	4,860
	0.875			216.31	571.05	X56	56,600	71,100	3,000	3,630	5,180
	0.875			216.31	571.05	X60	60,200	75,400	3,000	3,630	5,500
	0.875			216.31	571.05	X65	65,300	77,600	3,000	3,630	5,660
	0.875			216.31	571.05	X70	70,300	82,700	3,000	3,630	6,030
	0.875			216.31	571.05	X80	80,500	90,600	3,000	3,630	6,610
	0.938			231.25	610.49	B	35,500	60,200	1,660	2,080	4,710
	0.938			231.25	610.49	C	40,000	70,000	1,880		5,470
	0.938			231.25	610.49	X42	42,100	60,200	2,960	2,960	4,710
	0.938			231.25	610.49	X46	46,400	63,100	3,000	3,260	4,930
	0.938			231.25	610.49	X52	52,200	66,700	3,000	3,630	5,210
	0.938			231.25	610.49	X56	56,600	71,100	3,000	3,630	5,560
	0.938			231.25	610.49	X60	60,200	75,400	3,000	3,630	5,890
	0.938			231.25	610.49	X65	65,300	77,600	3,000	3,630	6,070
	0.938			231.25	610.49	X70	70,300	82,700	3,000	3,630	6,460
	0.938			231.25	610.49	X80	80,500	90,600	3,000	3,630	7,080
	0.969	60		238.57	629.82	B	35,500	60,200	1,720	2,150	4,860
	0.969	60		238.57	629.82	C	40,000	70,000	1,940		5,650
	0.969	60		238.57	629.82	X42	42,100	60,200	3,000	3,060	4,860
	0.969	60		238.57	629.82	X46	46,400	63,100	3,000	3,370	5,100
	0.969	60		238.57	629.82	X52	52,200	66,700	3,000	3,630	5,390
	0.969	60		238.57	629.82	X56	56,600	71,100	3,000	3,630	5,740
	0.969	60		238.57	629.82	X60	60,200	75,400	3,000	3,630	6,090

NOTE: This table is meant to be an abbreviated reference tool for the most common sizes and grades offered by U. S. Steel Tubular Products. To download a PDF version of the performance data or a complete listing, visit www.usstubular.com/connections/sl.

Outside Diameter NPS (inches)	Wall			Weight		Grade	Specified Minimum Strength (psi)		Mill Hydrostatic Test Pressure (psi)		Ultimate Burst (psi)
	Inches	Schedule Number	Class	lb/ft Plain End	Tons/ Mile		Yield	Tensile	Standard	Alternate	
OD 24.000											
NPS 24 OD 24.000 Seamless	0.969	60		238.57	629.82	X65	65,300	77,600	3,000	3,630	6,270
	0.969	60		238.57	629.82	X70	70,300	82,700	3,000	3,630	6,680
	0.969	60		238.57	629.82	X80	80,500	90,600	3,000	3,630	7,320
	1.000			245.87	649.10	B	35,500	60,200	1,780	2,220	5,020
	1.000			245.87	649.10	C	40,000	70,000	2,000		5,830
	1.000			245.87	649.10	X42	42,100	60,200	3,000	3,160	5,020
	1.000			245.87	649.10	X46	46,400	63,100	3,000	3,480	5,260
	1.000			245.87	649.10	X52	52,200	66,700	3,000	3,630	5,560
	1.000			245.87	649.10	X56	56,600	71,100	3,000	3,630	5,930
	1.000			245.87	649.10	X60	60,200	75,400	3,000	3,630	6,280
	1.000			245.87	649.10	X65	65,300	77,600	3,000	3,630	6,470
	1.000			245.87	649.10	X70	70,300	82,700	3,000	3,630	6,890
	1.000			245.87	649.10	X80	80,500	90,600	3,000	3,630	7,550
	1.031			253.15	668.32	B	35,500	60,200	1,830	2,290	5,170
	1.031			253.15	668.32	C	40,000	70,000	2,060		6,010
	1.031			253.15	668.32	X42	42,100	60,200	3,000	3,260	5,170
	1.031			253.15	668.32	X46	46,400	63,100	3,000	3,590	5,420
	1.031			253.15	668.32	X52	52,200	66,700	3,000	3,630	5,730
	1.031			253.15	668.32	X56	56,600	71,100	3,000	3,630	6,110
	1.031			253.15	668.32	X60	60,200	75,400	3,000	3,630	6,480
	1.031			253.15	668.32	X65	65,300	77,600	3,000	3,630	6,670
	1.031			253.15	668.32	X70	70,300	82,700	3,000	3,630	7,110
	1.031			253.15	668.32	X80	80,500	90,600	3,000	3,630	7,780
	1.062			260.41	687.48	B	35,500	60,200	1,890	2,360	5,330
	1.062			260.41	687.48	C	40,000	70,000	2,120		6,200
	1.062			260.41	687.48	X42	42,100	60,200	3,000	3,350	5,330
	1.062			260.41	687.48	X46	46,400	63,100	3,000	3,630	5,580
	1.062			260.41	687.48	X52	52,200	66,700	3,000	3,630	5,900
	1.062			260.41	687.48	X56	56,600	71,100	3,000	3,630	6,290
	1.062			260.41	687.48	X60	60,200	75,400	3,000	3,630	6,670
	1.062			260.41	687.48	X65	65,300	77,600	3,000	3,630	6,870
	1.062			260.41	687.48	X70	70,300	82,700	3,000	3,630	7,320
	1.062			260.41	687.48	X80	80,500	90,600	3,000	3,630	8,020
	1.219	80		296.86	783.71	B	35,500	60,200	2,160	2,700	6,120
	1.219	80		296.86	783.71	C	40,000	70,000	2,440		7,110
	1.219	80		296.86	783.71	X42	42,100	60,200	3,000	3,630	6,120
	1.219	80		296.86	783.71	X46	46,400	63,100	3,000	3,630	6,410
	1.219	80		296.86	783.71	X52	52,200	66,700	3,000	3,630	6,780
	1.219	80		296.86	783.71	X56	56,600	71,100	3,000	3,630	7,220
	1.219	80		296.86	783.71	X60	60,200	75,400	3,000	3,630	7,660
	1.219	80		296.86	783.71	X65	65,300	77,600	3,000	3,630	7,880
	1.219	80		296.86	783.71	X70	70,300	82,700	3,000	3,630	8,400
	1.219	80		296.86	783.71	X80	80,500	90,600	3,000	3,630	9,200

Pipe stored inside Lorain Tubular Operations No. 3 mill waiting for finishing and inspection

GLOSSARY

ANSI	American National Standards Institute (Formerly the ASA – American Standards Association)
API	American Petroleum Institute
ASME	American Society of Mechanical Engineers
ASTM	American Society for Testing and Materials
AWWA	American Water Works Association
Bare	Term associated with pipe surface whereby the pipe will not be coated with a corrosion inhibitor and grease spots and cutting oil will not be removed.
Barlow's Formula	An equation which shows the relationship of internal pressure to allowable stress, nominal thickness and diameter (P = 2St/D).
Bevel	The angle formed between the prepared edge of the end of the pipe and a plane perpendicular to the surface of the member. The standard bevel for line pipe is 30 degress to facilitate welding.
Billet	A solid semi-finished round or square product that has been either directly cast from a strand caster or hot-worked by forging, rolling or extrusion.
BOP or BOF	Basic Oxygen Process or Basic Oxygen Furnace for steel making.
Burst Test	A destructive hydraulic test employed to determine actual yield strength and tensile (ultimate) strength of both seamless and welded pipe.
CE	Carbon Equivalent
Charpy Test	A method for measuring the amount of energy absorbed by a notched specimen during fracture as a result of an impact load. Commonly used to measure the resistance of crack propagation of the material being tested.
Chemical Properties	Normally associated with a limited number of chemical elements. Minimum and/or maximum limits are established in most ASTM and API specifications.
Coating	The process of covering steel with another material, primarily for corrosion resistance.
Continuous Casting	The process of pouring and the solidification of steel in a continuous strand.
Continuous Weld (CW)	In common usage, a phrase for continuous butt weld.
Coupling	Threaded sleeve used to connect two lengths of pipe.
Cut Length	Pipe cut to a specific length as ordered.
DN	Diameter Nominal. A dimensionless designator for such traditional terms as "nominal diameter", "size" and "nominal size".
DRL	Double Random Length (35' minimum average or as defined in specifications).
Dry	Term associated with pipe surface whereby the pipe will not be coated with a corrosion inhibitor and all grease spots and cutting oil will be removed by washing.
DS	Dual Stencil

Ductility	The ability of a material to deform plastically without fracturing, being measured by elongation or reductions of area in a tensile test or by other means.
EAF	Electric Arc Furnace
Elongation	In tensile testing, the increase in the gage length, measured after fracture of the specimen within the gage length, usually expressed as a percentage of the original gage length.
ERW	Electric Resistance Weld
Flattening Test	A quality test for a pipe in which a specimen is flattened between parallel plates that are closed to a specified distance.
Fracture Test	Breaking a piece of metal for the purpose of examining the fractured surface to determine the structure or ductile characteristics of the metal, or to detect the presence of internal defects.
Galvanized	Covering of iron or steel surfaces with a protective layer of zinc.
Grade	The term grade designates divisions within different types based on chemical or mechanical properties.
Hardenability	The property that determines the depth to which the steel will harden.
Hardness	Defined in terms of the method of measurement. (1) Usually the resistance to indentation. (2) Stiffness of temper of wrought products. (3) Machinability characteristics.
Heat	An individual batch of metal of a single chemical composition, which is produced by a single cycle of a batch melting process.
Heat Analysis (Ladle)	The term applied to the chemical analysis representative of a heat of steel. It is determined by analyzing (for such elements as have been specified) a test sample obtained during the pouring of the steel from a ladle.
HIC-Resistant Steel	Intended for use in H_2S environment (wet sour gas environment) and has resistance to hydrogen-induced cracking (HIC). United States Steel's HIC-Resistant Steel is produced using a clean steel practice with restricted sulfur levels and calcium injection for enhanced sulfide morphology. HIC testing is in accordance with NACE Standard TM-0284-00 using either the BP solution or the NACE TM-01-7 solution. Limits on CLR, CTR and CSR, along with any other restriction, are generally agreed to prior to order entry.
Hydrostatic Test	Normal mill test as required by specifications. The pipe ends are sealed, filled with water and pressurized to predetermined pressures as required by specifications.
ID	Inside Diameter of pipe
Impact Test	A test performed at a specified temperature to determine the behavior of material when subjected to high rates of loading, usually in bending, tension or torsion. The quantity measured is the energy absorbed in breaking the specimen by a single blow, as in a Charpy test.
Inclusions	Non-metallic solid material entrapped in the weld deposit or between weld metal and base metal. Also found in base metal, and results from products of oxidation or material erosion or entrainment during the steelmaking process.
Killed Steel	Please see page 96 for complete definition
LRL	Long Random Length

Magnetic Particle Inspection	One of several methods of non-destructive testing. A non-destructive method of inspection for determining the existence of possible defects in ferromagnetic materials. Fine magnetic particles are applied to magnetized parts, which are attracted to and outline the pattern of any magnetic-leakage fields created by discontinuities.
MAOP	Maximum Allowable Operating Pressure
Mechanical Properties	The properties of a material that reveal its elastic and inelastic behavior where force is applied, thereby indicating its suitability for mechanical applications; for example, tensile strength, elongation and hardness.
NDE	Non-Destructive Examination is the utilization of non-destructive testing methods primarily, eddy current, liquid penetrant, magnetic particle, radiography and ultrasonics.
Normalizing	Heating a ferrous material to a suitable temperature above the transformation range and then cooling in air to a temperature substantially below the transformation range.
NPS	Nominal Pipe Size – A dimensionless designator for such traditional terms as "nominal diameter", "size" and "nominal size". Corresponds to actual outside diameter only in sizes 14 inches and over.
OD	Outside Diameter of pipe
PE	Plain End
PSC	Plain End Square Cut
Product Analysis	A chemical analysis of the pipe.
PSI	Pounds per Square Inch
PSIG	Pounds per Square Inch Gage
PSL	Product Specification Level
QS	Quad Stencil – United States Steel typical quad Stencil for seamless is ASTM A53 Grade B, ASTM A 106 Grade B, API 5L Grade B and Grade X42.
Round	Solid steel billet used in seamless pipe manufacturing
Regular Mill Coat	Term associated with pipe surface whereby the pipe will be coated with a corrosion inhibitor.
SC	Square Cut
Schedule Numbers	ANSI numbers assigned to pipe to designate wall thickness depending upon outside diameter.
Skelp	Wrought iron or steel (typically hot-rolled coil) from which pipe or tubing is made.
SMLS	Seamless
SMTS	Specified Minimum Tensile Strength
SMYS	Specified Minimum Yield Strength
SRL	Single Random Length
STD	Standard
Stencil	Paint spray identification placed on pipe. Specification, size, wall, grade, test pressure, method of manufacture, and normal mill characters and mill identification are usually included; however, detail varies by specification.

Straightening	The removal of sweep and camber by roller straightening or by use of a gag press.
Stress	The load per unit of area. Ordinarily stress-strain curves do not show the true stress (load divided by area at that moment).
Stress Relieving	A process of reducing residual stresses in a metal object by heating the object to a suitable temperature and holding for a sufficient time, and cooling slowly. This treatment may be applied to relieve stresses induced by casting, quenching, normalizing, machining, cold working or welding.
Surface Inspection	The inspection of the surface of products for defects such as: scabs, seams, burned steel, laps, twist, guide marks, etc.
T&C	Threaded and Coupled
TBE	Threaded Both Ends
Tensile Strength	In tensile testing, the ratio of maximum load to original cross-sectional area. Also called ultimate strength. Usually expressed in PSI.
Toughness	Property of absorbing considerable energy before fracture; usually represented by the area under a stress-strain curve, and therefore involving both ductility and strength.
TS	Triple Stencil. United States Steel typical triple stencil for seamless is ASTM A53 Grade B, ASTM A106 Grade B and API 5L Grade B.
Ultrasonic Test (UT)	A non-destructive testing method of detecting, locating, and measuring both surface and subsurface defects in metals with the use of high-frequency sound.
XS	Extra Strong standard pipe weight designation. Sometimes described as XH (extra heavy).
XXS	Double Extra Strong standard pipe weight designation. Sometimes described as XXH (double extra heavy).
Yield Point	In mild- or medium-carbon steel, the stress at which a marked increase in deformation occurs without increase in load. In other steels and in nonferrous metals this phenomenon is not observed.
Yield Strength	The stress at which a material exhibits a specified deviation from proportionality of stress and strain. An offset of 0.2% is used for many materials including steel. API 5L states that the yield strength shall be the tensile stress required to produce a total elongation of 0.5% of the gage length as determined by an extensometer or by multiplying dividers. Usually expressed in PSI.

FREQUENTLY ASKED QUESTIONS

The following section contains questions that we receive more than any others related to the manufacturing, processing, storing, and transporting standard and line pipe.

- **Carbon Equivalency: When to Use What Equation?**

Carbon Equivalent is a measure of the tendency of a weld to form Martensite upon cooling after welding: high levels of Martensite may result in a brittle fracture after welding. API 5L puts limits on the maximum Carbon Equivalency of a pipe to ensure problem-free welding of pipe girth welds. Sections 9.2.4 and 9.2.5 of API 5L 46th edition offer two Carbon Equivalent equations, and the decision to use one over the other is based on the product analysis carbon content. If the carbon content based on the product analysis is 0.12% or lower, the CE_{Pcm} formula is used. If the carbon content based on the product analysis is greater than 0.12%, the CE_{IIW} formula is used.

- **Killed Steel: What Does It Mean?**

Killed Steel is steel that has been completely deoxidized by the addition of various agents before casting, such that there is practically no evolution of gas (typically oxygen) during solidification. During the manufacture of steel, oxygen is blown into the liquid iron to remove various elements that may be unwanted in the finished steel. After the oxygen blowing is complete, excess oxygen in the liquid steel will continue to bubble out, or evolve, and it appears like the steel is boiling. By adding aluminum and/or silicon to the liquid steel, the aluminum and silicon combine with the excess oxygen, creating alumina or silica oxides, which are solids and eliminate the "boiling" of the steel. Killed steel is a requirement of the continuous casting process, and promotes a high degree of chemical homogeneity and freedom from gas porosities.

- **Lorain Tubular Operations No. 3 Mill: What Are Long Randoms and Why Do We have These Lengths?**

Lorain No. 3 Seamless mill manufactures seamless pipe beginning with a solid, round billet of steel. The maximum size billet Lorain can utilize is 13-1/2 inches in diameter and 16 feet, 4 inches in length. This billet of steel weighs approximately 7,900 pounds. Certain combinations of large diameter, heavy wall pipe in double random lengths (~40 foot length) can exceed the maximum weight (7,900 pounds) that Lorain can produce (Example: 24" x 0.938" X 40' = 9,250 pounds). Long Random length range was made available to fill the void between API 5L's Single Random and Double Random lengths in order to accommodate these shorter, maximum weight OD/Wall combinations.

- **Charpy V-Notch (CVN) Impact Testing at Different Temperature: Why and What Are The Effects of Temperature?**

The Charpy Impact testing is a standardized test that determines the toughness, or impact strength of a material in the presence of a flaw or notch and fast-loading conditions. Steel chemistry, manufacturing method, heat treatment and geometry all have an influence on how the steel performs in a Charpy Impact test. Charpy Impact energy is also affected by the temperature at which the test is performed. Typically, the energy absorbed during the Charpy Impact testing trends lower as the temperature of the actual test piece gets colder. By carefully controlling the chemistry, heat treatment and the processing of the steel pipe, this reduction in Charpy Impact energy can be almost eliminated, even when the steel is Charpy tested as cold as -70°F.

Machined charpy v-notch samples are ready for testing

FREQUENTLY ASKED QUESTIONS

- **Compare and Contrast the Surfaces of Seamless versus ERW Pipe**

The seamless pipe manufacturing process begins with a solid steel billet heated to a temperature near 2,400°F. As this hot billet progresses through the pipe-making process, additional furnaces are used to heat the in-process pipe to proper rolling temperatures. Because of these high temperatures utilized for seamless pipe making, light scale will form on both the outside and inside diameter surfaces of the pipe during manufacture, and this scale will leave small indentations on the surfaces. When complete, seamless pipe surfaces can have the appearance of an "orange peel" surface.

The substrate for ERW pipe comes from coils of steel produced at flat rolled mills. Prior to final rolling, with the steel temperature near 1,800°F, the top and bottom of the steel is blasted with high pressure water sprays to remove any scale that may be on the outside and inside diameter surfaces. Because of the high pressure descaling, the surface condition of the coiled steel used for ERW pipe is smooth and clear of light indentations typical of seamless pipe.

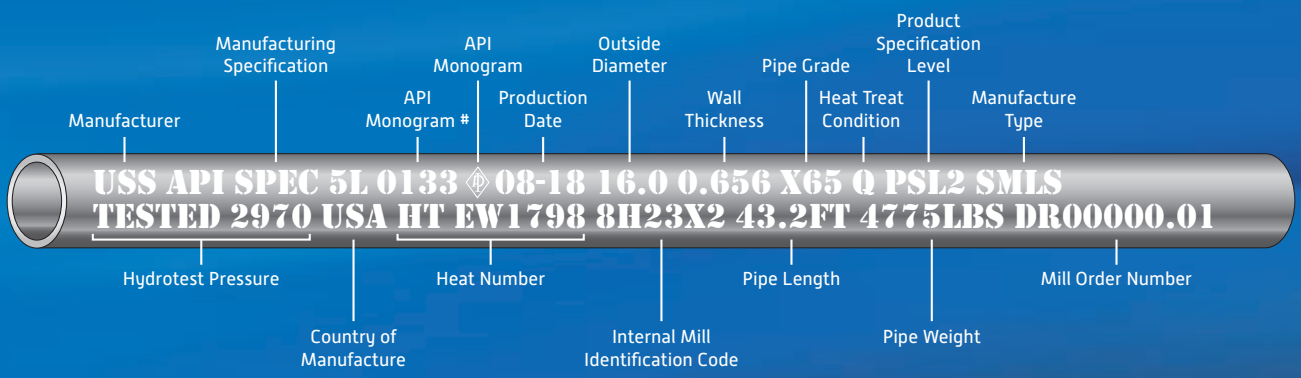
- **Stencil Example: What Does It All Mean?**

Below, you will find a typical pipe with stencils from U. S. Steel mills around the country:

- **Traceability of Our Products. What We Do to Ensure Traceability**

Every piece of pipe that U. S. Steel Tubular Products manufactures will have the heat number stenciled on the OD surface. This heat number is traceable back to the Certified Mill Test Report (CMTR) that is supplied with each order of pipe. All of the heats that are shipped in an order are listed in the CMTR. For each heat of pipe supplied in an order, the CMTR will show the results of the chemical and mechanical tests (Yield, Tensile, Elongation, Charpy Impact, Etc.), plus the CMTR will show the details of the NDT testing that was performed for that order.

Typical Pipe Stencils Defined



Connecting America to Energy Independence®

U. S. Steel Tubular Products
460 Wildwood Forest Drive, Suite 300S
Spring, Texas 77380
Toll Free: 1-877-893-9461
Tel: 281-671-3790
Fax: 281-671-3879
www.usstubular.com

U. S. Steel Tubular Products