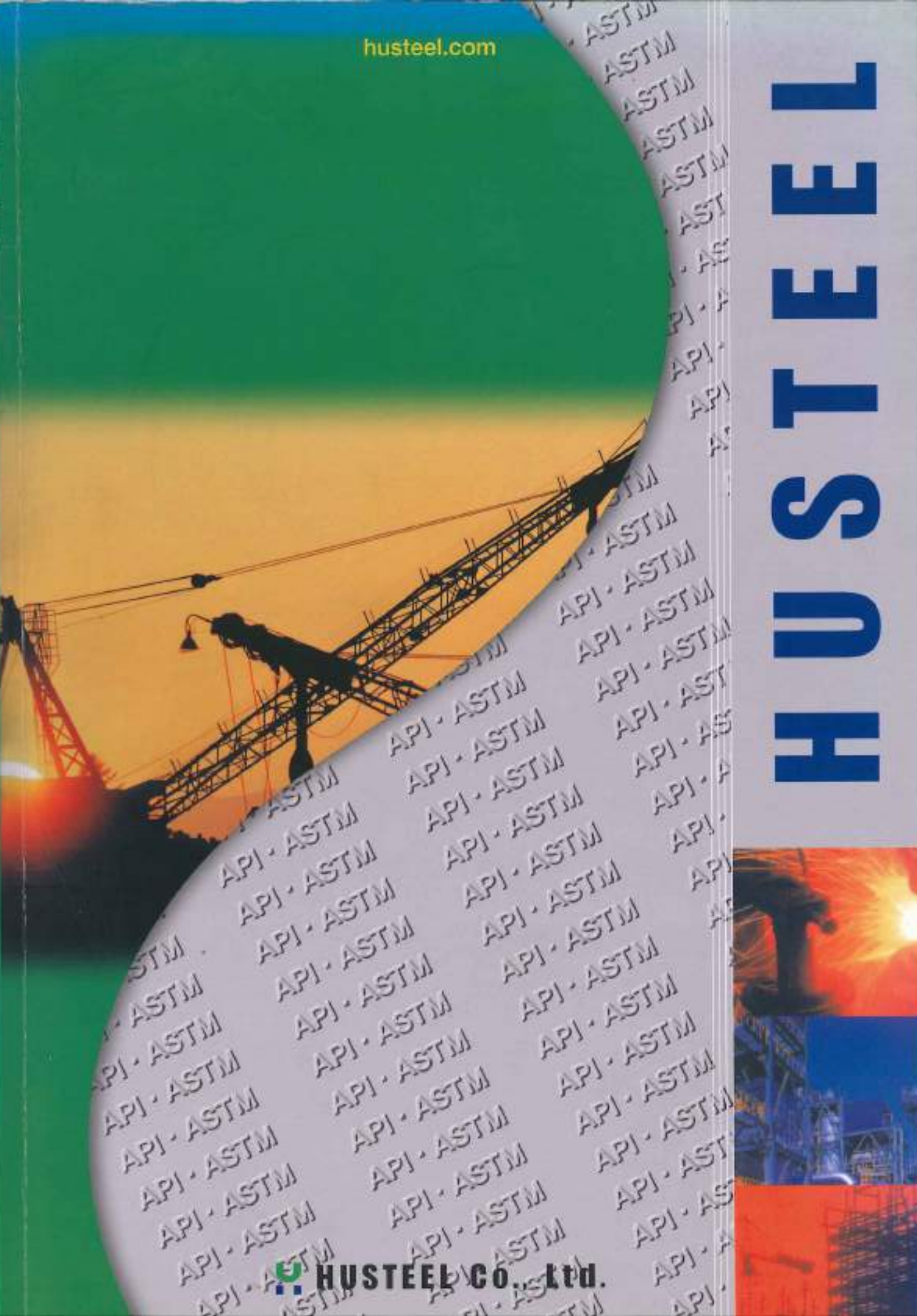



[husteel.com](http://husteel.com)

# HUSTEEL



 **HUSTEEL CO., LTD.**





# HUSTEEL

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Husteel Co., Ltd. Annually produces about 700,000M/T of Various steel pipe in its Incheon, Daebul plants which are equipped with the most advanced facilities. It is becoming a world-class steel production company through its principle of "winning the customer's confidence and satisfaction with the best quality and service."

Husteel, which established a reputation as a general steel pipe manufacturer, has developed a variety of standard products which are required by both the home and industrial sites. The company strives to produce the best quality products in its Incheon and Daebul plants where a high level of productivity is achieved through state-of-the-art facilities and equipment.

Incheon plant is producing various small & medium diameter steel pipe such as water, oil & gas supply pipe, PFP pipe(polyethylene powder lining steel pipe), structural pipe & Machine structural pipe, Boiler and Heat Exchanger Tubes.

And Daebul plant is producing large diameter steel pipe up to 24" and column steel pipe, the largest diameter in Korea.

The pipes produced by Husteel are qualified by acquiring KS, JIS, UL, API, KR, DNV, Lloyd, GL, ISO 14001 and ISO9002, and especially it is able to produce even API X-80 and higher grade of high quality steel pipe.



## HUSTEEL

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### ▪ Brief history of Husteel Co., Ltd.

- 1967. 4 Established in yeongdeungpo-Ku, Seoul, Korea
- 1973. 5 Listed on the stock-market with the capital five hundred million Korean Won
- 1974. 10 Completed and commenced operation of mill in Incheon, Korea
- 1974. 11 Awarded a Medal of the President and a Medal of the Prime Minister for export contribution
- 1980. 6 Founded Saudi Steel Pipe Co., Ltd. in Dammam, Saudi Arabia with the joint-venture basis
- 1985. 5 Awarded the Steel Tower on National commerce and industry day
- 1986. 8 Signed for Technical Tie-up with Nippon Steel Co., Ltd. for producing polyethylene powder Lined Pipe
- 1995. 5 Completion of Daebul Mill in Chollanam-Do
- 1995. 7 Obtained certification of ISO 9002
- 1995. 12 Changed the firm name to SHINHO STEEL Co., Ltd.
- 1999. 6 Obtained certification of ISO 14001
- 2002. 3 Changed the firm name to HUSTEEL Co., Ltd.

▪ Personnel Status : 623Persons(As of July 2004)

▪ JOINT-Venture Company : Saudi steel Pipe Co., Ltd.

▪ OVERSEAS BRANCH : HUSTEEL USA INC.



**HUSTEEL**

### Warnings and Cautions in Use

#### Warnings

1. If product is not in use for its specified purposes as listed in the product specification & its use, severe accidents may occur. please contact our company for more information when diverting its specified use to other.



2. When laying fuel gas, oil, and water supply pipes under ground, anti-corrosive coating must be applied to exterior and interior surface of the pipes. Failing to do so may cause severe accidents due to product damage from corrosion.



3. If products not designed for drinking water purpose is in use, corroded materials will cause ill effects to human body.



#### Cautions

1. While constructing, if proper anti-corrosive treatment is not applied to the area near the flow of electricity, severe accidents may occur due to product damage caused by electric corrosion.



2. If product is exposed to chemicals (black pipes) alkalinity (white pipes), rapid corrosion will occur. Please contact our company for more detailed information.



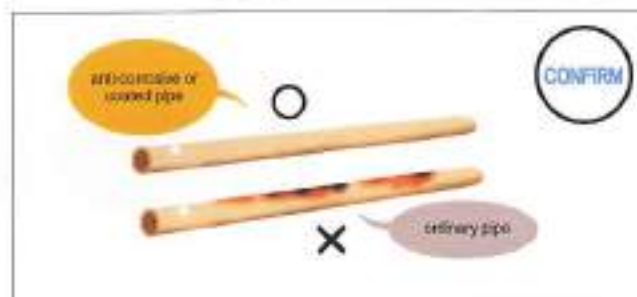
3. Excessive imprints, extension, or bending of the pipes during the secondary process may damage the pipes. Please contact our company for more detailed information.



4. Excessive bending of zinc coated steel pipe may cause cracks of zinc-plated layer.



5. Use either anti-corrosive or coated steel pipes only when the product is expected to be used in a condition where it is highly vulnerable to corrosion.



6. While handling long pipes around the power lines, be careful not to touch the power lines with the pipes.



7. According to the environment where pipes are in use, please check the inspection and replacement time for pipes periodically.



8. Please check for any alien substances inside the pipe before using pipe. Please remove if necessary.

### Warnings and Cautions in Transport and Handling

#### Warnings

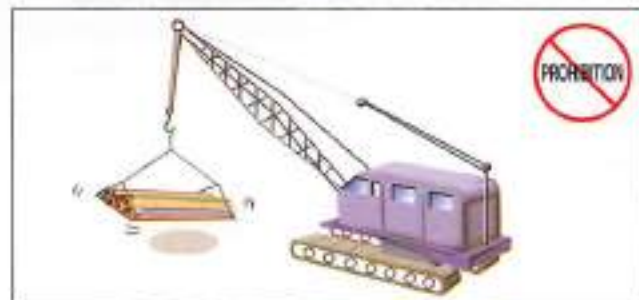
1. If product is not tied tightly to the vehicle, accident may occur as it might dislocate or fall down while transporting.



2. While loading and unloading, maintaining balance of the pipes are crucial in order to avoid accidents caused by falling pipes.



3. Sudden operation of transport equipment, such as crane, while moving product causes swaying of the products that may cause accidents.



4. While moving product with forklift, sudden turn or stop causes swaying of the product that may cause accidents.



5. During transit, severe rust may occur if product is exposed to rain, sea water, other moisture, or chemicals.

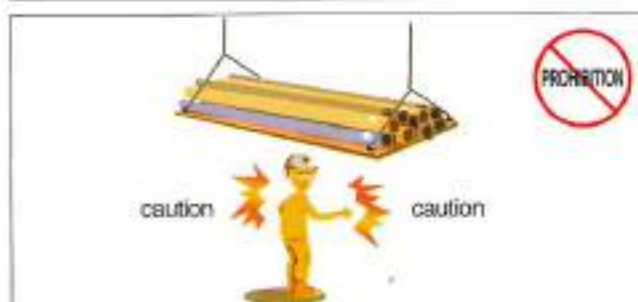




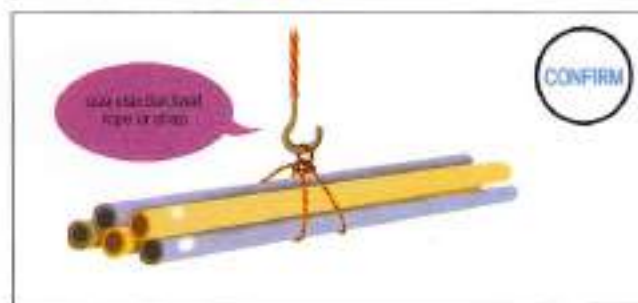
6. When overloaded, there is danger of overturning of the vehicle and falling of the product when vehicle is turned or stopped suddenly.



7. Never get down below the product. Please keep safe distance away from the product while working.



8. While moving the product, accident may occur due to breaking off the cord if unspecified or damaged cord is used.



## Cautions

1. While handling the product, safety accident may occur if safety devices (safety helmet, working boots, etc) are not put on.



### Warnings and Cautions in Storage



#### Warnings

1. Storing the product outdoor or in the open-air yard may degrade its quality further.
2. Please store product by maintaining at a straight level. Please also prop both ends of the product to prevent it from rolling down.
3. Piling the products high or loading it at an unstable condition may cause accident from falling down of the products.



#### Cautions

1. Storing the product in an environment with high level of chemicals, moisture, or salinity cause rapid corrosion, degrading its quality.
2. Please load and store properly, so it does not cause any damage from the load.



**• Main Products**

Classification	Description	Related spec number
For piping	Pipes for General Ordinary Piping	KS D 3507 JS G 3452 ASTM A 53A
	Pipes for Pressure Service	KS D 3562 KIS Q 3454, ASTM A53B
For Oil Piping	Line pipe	API 5L
	Casing & Tubing	API 5CT
For protecting electric wires	Rigid Steel Conduit	KS C 8401 JS C 8305 UL 6 ANSI C 80.1
For structural Purposes	Tubes for General Structural Purposes	KS D 3566 JS G 3444 ASTM A 500
	Square & rectangular Tubes	KS D 3568 JS G 3466 ASTM A 500
	Tubes for mechanical Structural Purposes	KS D 3517 JS G 3445
	Pipe Scaffoldings	KS F 8002 KS F 8003
	Steel pipe piles	KS F 4602, JS A5525 ASTM A 252
For Boiler and Heat Exchanger	Carbon steel Boiler and Heat Exchanger Tubes	KS D 3563, BS 3059 JS G 3461 ASTM A 178
For Drinking Water System	Galvanized steel pipes for water service	KS D 3537 JS G 3442
	Corrosion resistance welded steel pipes for water service	KSD 3623
	Polyethylene Powder lining steel Pipes for Water works	KS D 3619 JWWA K 132
For Fuel Gas Piping	Carbon Steel Pipes for Fuel Gas Piping	KS D 3631

**▶ Head office**

14/15F, Shinun B/D, 943-19, Daechi-Dong, Kangna-Ku, Seoul, Korea.  
Tel. 02-828-9000

**▶ Incheon Plant**

#68, Hakje-Dong, Nam-Ku, Incheon, Korea  
Tel. 032-670-3114

**▶ Daebul Plant**

#11 Block, Daebul National Industrial Complex, Nabul-Ri, Samho-Myeon, Youngam-Kun, Jeollanam-Do, Korea  
Tel. 061-4601-114

### 1. Manufacturing Facilities & Capacity(Inchon Plant)

Facilities	Availability	Annual Capacity(M/T)
Sitter	Thickness(Max) × Width(Max) 9.5mm × 1550mm	420,000
No. 2. Tube mill	1"~2½"(1.5~7.0t)	50,000
No. 4. Tube mill	2"~8"(2.5~8.6t)	80,000
No. 6. Tube mill	4"~12"(3.0~12.7t)	72,000
No. 7. Tube mill	¾"~2"(1.5~4.6t)	60,000
No. 9. Tube mill	2"~4"(1.5~8.1t)	50,000
No. 11. Tube mill	½"~1"(0.8~2.9t)	36,000
No. 4. Galvanizing Line	½"~4"	60,000
No. 5. Galvanizing Line	½"~5"	90,000
No. 6. Galvanizing Line	½"~36"	60,000
No. 1. Threading Machine	½"~4"	60,000
No. 2. Threading Machine	2½"~8"	65,000
No. 3. Threading Machine	½"~4"	67,000
No. 4. Threading Machine	½"~4"	65,000
No. 5. Threading Machine	4"~12"	65,000
P.E.Coating & Lining Line	½"~4"	25,000
Post Annealer 1		
2	600KW	22,000
3		
Roller Hearth Type Furnace	½"~5"	25,000

### 2. Manufacturing Facilities & Capacity(Daebul Plant)

Facilities	Availability	Annual Capacity(M/T)
No. 1. Tube mill	Round : 8"~24" Square : 200×200mm ~500×500mm Thickness : 3.2~22mm Length : 5~21M	300,000

Inchon Plant(E.R.W)

Outside diameter (mm)	Wall Thickness												
	1	2	3	4	5	6	7	8	9	10	11	12	13
21.7													
27.2													
34.0													
42.7													
48.6													
60.5													
76.3													
89.1													
101.6													
114.3													
139.8													
165.2													
216.3													
267.4													
318.5													

Daebul Plant(E.R.W)

Outside diameter (mm)	Wall Thickness																						
	3.2	3.3	3.8	4.5	4.8	5.4	5.6	6.0	6.4	7.1	8.0	9.0	10.0	11.0	12.0	13.5	14.0	15.1	15.9	16.1	19.0	22	
216.3																							
267.4																							
318.5																							
355.6																							
406.4																							
457.2																							
508.0																							
558.8																							
609.6																							

Inchon Plant

Spec	Spec. No	Specification	Code	Application	Approv. No	Approv. Date	Authority
Spec	ISO 9002	Quality Management System	ISO	ERW : 1/2" ~ 12" Polyethylene Coated Steel Pipe : 1/2" ~ 4" Hot Dip Galvanized Steel Pipe : 1/2" ~ 24" Production, Sales and Servicing	AC-00092	95.7.15	KFQ
API	API 5L API 5CT	Line Pipe Casing & Tubing	API	API 5L(PSL1, 2)	5L-0325	78.3.31	API
				API 5CT	SCT-0421		
KR	Steel Tubes and Pipes	Steel Tubes for Boiler & Heat Exchanger	RSTH	33-E-G, 35-E-G	77-001	77.12.30	KR
		Steel Tubes for Pressure Piping	RST	128-E-G, 142-E-G	77-002	77.12.30	KR
KS	KS D 3507	Carbon Steel Pipes for Ordinary Piping	SPP	Black, Galva 10A-300A Galva 350A-600A	45	64.12.30	KSA
	KS D 3631	Carbon Steel Pipes for Fuel Gas Piping	SPPG	300A and smaller	99-0657	99.6.11	KSA
	KS C 8401	Rigid Steel Conduits	-	Thick Wall Steel Conduits (Hot Dip Galvanized Steel Conduits)	97	85.7.10	KSA
	KS D 3537	Galvanized Steel Pipes for Water Service	SPPW	10A~300A	1607	78.3.20	KSA
	KS D 3517	Carbon Steel Tubes for Machine Structural Purposes	STKM	STKM 11A, STKM 12A, STKM 12B STKM 13A, STKM 13B, STKM 14A (O.D) 21.7~213mm	2172	60.8.21	KSA
	KS D 3562	Carbon Steel Pipes for Pressure Service	SPPS	Sch 20, 50A~300A	2821	60.8.21	KSA
				Sch 30, 200A~300A			
				Sch 40, 15A~300A			
				Sch 60, 15A~200A			
				Sch 80, 15A~200A			
KS D 3563	Carbon Steel Tubes for Boiler and Heat Exchanger	STBH	STBH 340, STBH 410 (O.D) 15.9~139.8mm	2173	60.8.21	KSA	
KS D 3566	Carbon Steel Pipes for General Structural Purposes	STK	STK 280 : 21.7~318.5mm STK 400 : 21.7~318.5mm 406.4~1016.0mm STK 500 : 21.7~318.5mm STK 490 : 21.7~318.5mm STK 540 : 21.7~318.5mm	2822	82.10.16	KSA	
KS D 3568	Carbon Steel Square Pipes for General Structural Purpose	SPSR	SPSR 400, SPSR 490 20×20~150×150mm SPSR 400:200×200~250×250mm	2823	82.10.16	KSA	
KS D 3619	Polyethylene Powder Lining Steel Pipes for Water Service	PA~PD	Type 1~4(15A~100A)	5774	88.1.14	KSA	
KS D 3623	Corrosion Resistance Welded Steel Pipes for Water Service	SPCR	Black : 15A~300A Galva : 15A~300A	10879	94.4.9	KSA	
JIS	JIS G 3444	Carbon Steel Pipes for General Structural Purposes	STK		KR 8623	86.1.21	MITI
	JIS G 3445	Carbon Steel Tubes for Machine Structural Purposes	STKM		KR 8623	86.1.21	MITI
	JIS G 3456	Carbon Steel Square Pipes for General Structural Purposes	STKR		KR 8623	86.1.21	MITI
	JIS G 3452	Carbon Steel Pipes for Ordinary Piping	SOP	Black, Galva	KR 8624	86.1.21	MITI
	JIS G 3454	Carbon Steel Pipes for Pressure Service	STPG		KR 8624	86.1.21	MITI
	JIS G 3461	Carbon Steel Tubes for Boiler and Heat Exchanger	STB	STB 340, 410, 510	KR 8750	87.12.3	MITI
	JIS C 8325	Rigid Steel Conduits	-		KR 8976	89.10.23	MITI
UL	UL-6	RIGID STEEL CONDUIT	UL		FILE E 84175	82.12.21	UL

LLOYD	Welded Pipe and Tube	Welded pipes and Tubes in Carbon and Carbon-manganese Steel	-	Max 323.9mm diameter 12mm Wall thickness	MD00/2157 /0003/4	98.1.14	Lloyd's Register
DNV	Welded Pipe and Tube	Steel Tubes and Pipes for Boiler & Heat Exchanger	-	Max 323.9mm diameter 12mm Wall Thickness	ANM-1356	98.1.14	Det Norske Veritas
		Steel Tubes and Pipes for ordinary pressure system	-				
GL	Welded Pipe and Tube	JS G 3454, JS G 3461	-	STPG 370, 410 STB 340, 410, 510	W2959HH	99.1.9	Germanischer Lloyd

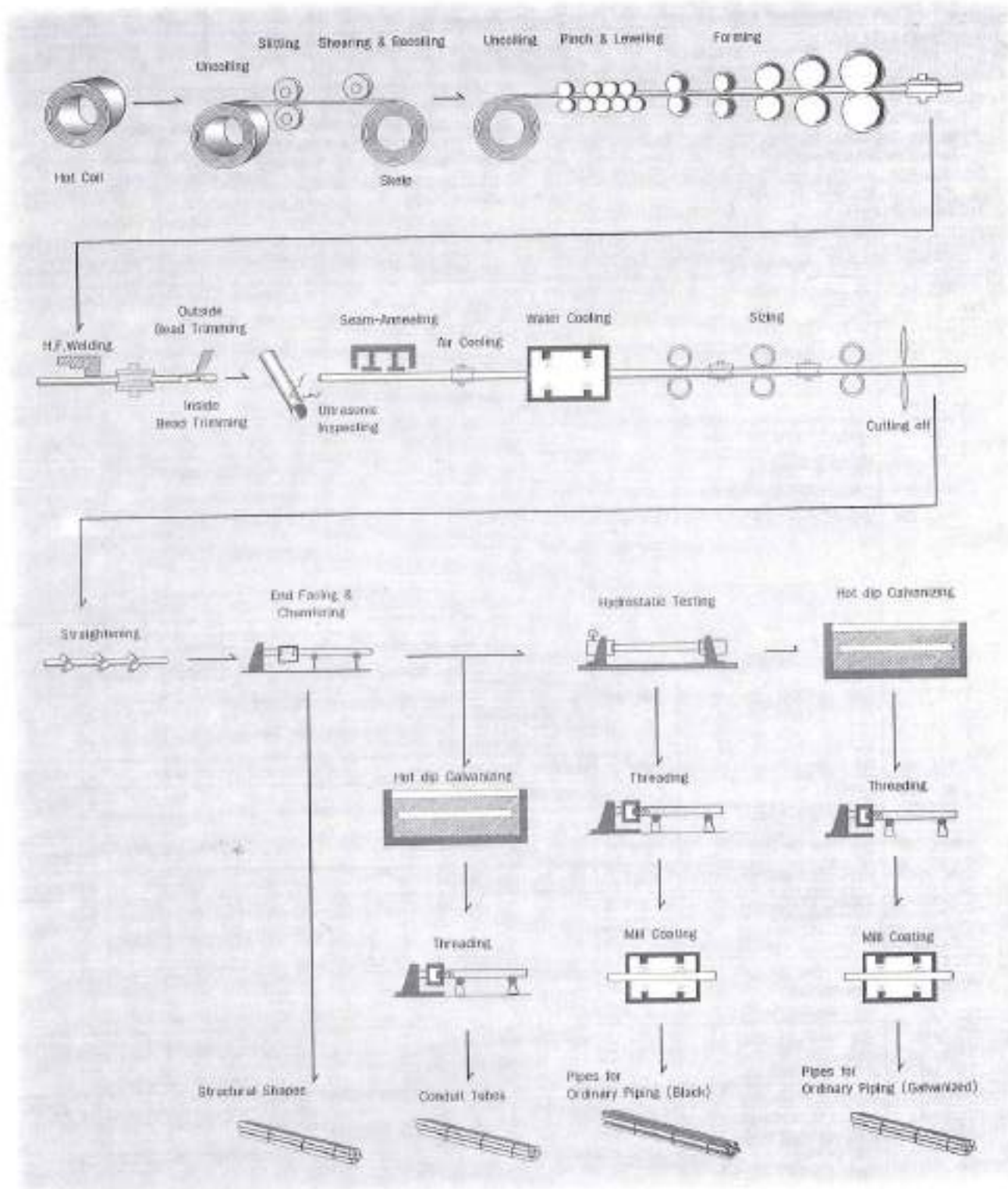
\* KFQ : Korean Foundation for Quality  
 \* KSA : Korean Standards Association  
 \* KR : Korean Register of Shipping  
 \* KS : Korea Industrial Standards

\* JS : Japanese Industrial Standards  
 \* MITI : Japan Ministry of International Trade and Industry  
 \* UL : Underwriters Laboratories  
 \* API : American Petroleum Institute

### Daebul Plant

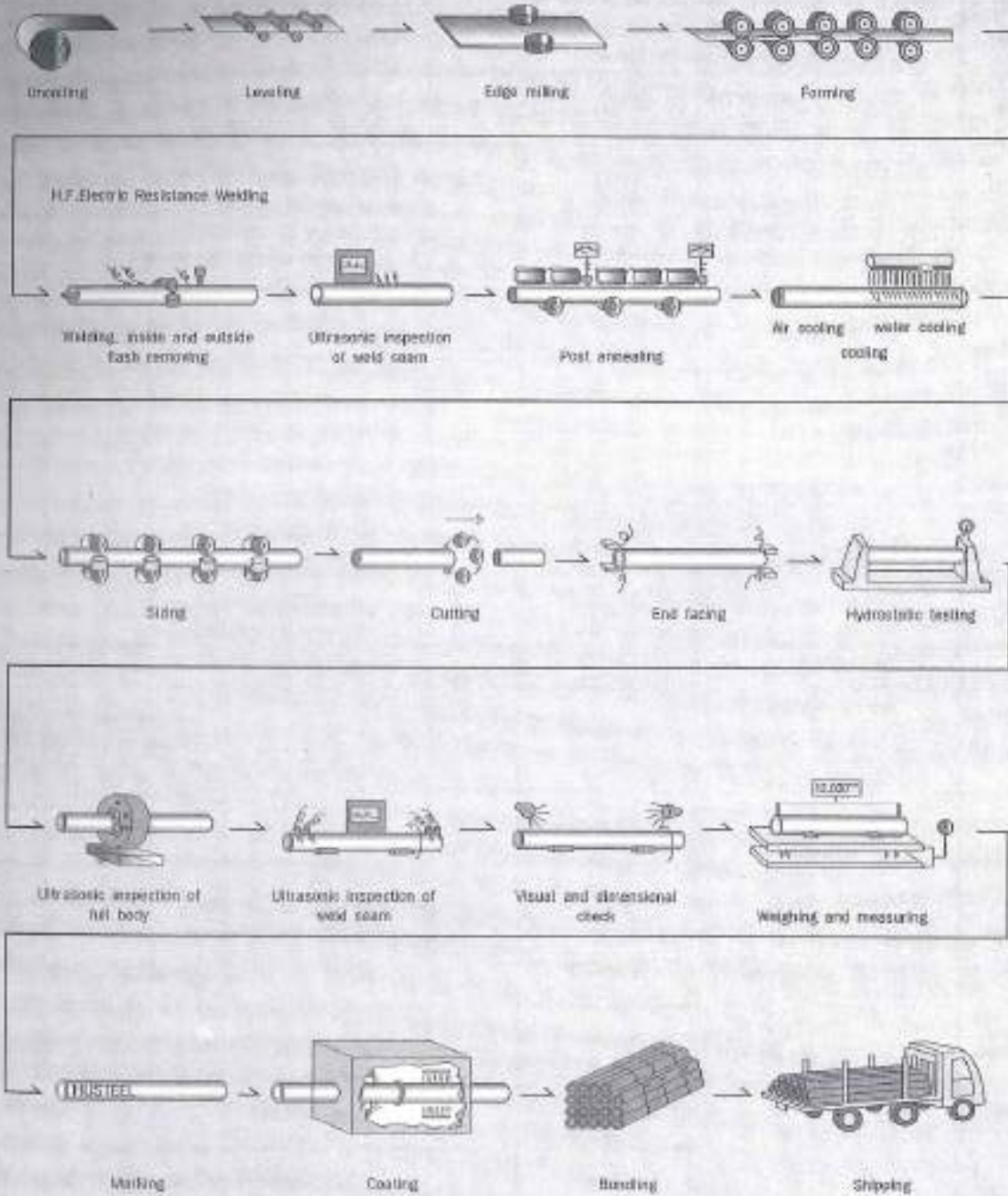
Spec	Spec. No	Specification	Code	Application	Approx. No	Approv. Date	Authority
ISO	ISO 9002	Quality Management System	ISO	ERW : 8" - 24" Production, Sales and Servicing	AC-00092	96.7.15	KFQ
	ISO 14001	Environmental Management System	ISO	Environmental Management System	EAC-01695	99.6.16	KFQ
API	API 5L	Line Pipe	API	API 5L(PSL 1, 2)	5L-0325.1	95.7.31	API
	API 5CT	Casing & Tubing		API 5CT	5CT-0421.1		
KS	KS D 3507	Carbon Steel Pipes for Ordinary Piping	SPP	Black 200A-600A	95-08-002	95.8.18	KSA
	KS D 3631	Carbon Steel Pipes for Fuel Gas Piping	SPPG	200A-600A	99-0660	99.6.11	KSA
	KS D 3566	Carbon Steel Pipes for General Structural Purposes	STK290	216.3mm ~ 609.6mm	95-08-004	95.8.18	KSA
			STK400	218.5mm ~ 609.7mm			
			STK490	218.5mm ~ 609.7mm			
	KS D 3568	Carbon Steel Square Pipes for General Structural Purpose	SPSR400	200 x 200-350 x 350mm	95-08-005	95.8.18	KSA
KS F 4932	Steel Pipe Piles	-	406.4, 508.0, 609.6mm	95-08-006	95.8.18	KSA	
KS D 3562	Carbon Steel Pipes for Pressure Service	SPPS38	Sch 40(200A-600A)	95-08-20	95.8.18	KSA	
			Sch 10(400A-600A)				
			Sch 20(250A-600A)				
			Sch 30(200A-600A)				
JS	JS G 3452	Carbon Steel Pipes for Ordinary Piping	SGP	Black 200A-500A	KR 9556	95.9.27	MITI
	JS A 5525	Steel Pipe Piles	SHK	406.4, 508.0, 609.6mm	KR 9554	95.9.27	MITI
	JS G 3454	Carbon Steel Pipes for Pressure Service	STPG	200A-600A	KR 9556	95.9.27	MITI
	JS G 3444	Carbon Steel Pipes for General Structural Purposes	STK	216.3-609mm	KR 9555	95.9.27	MITI
	JS G 3466	Carbon Steel Square Pipes for General Structural Purposes	STKR	200 x 200-350 x 350mm	KR 9588	98.12.18	MITI
ARAMCO	SAMSS-13	ARAMCO VENDOR	APL 5LX78	8" (219.1) - 24" (610mm)	TK 6045-1	95.11.1	ARAMCO Company
	SAMSS-33	ARAMCO VENDOR	APL G-8-X85				
LLOYD	Welded Pipe and Tube	Welded pipes and Tubes in Carbon and Carbon-manganese Steel	-	Max 610mm diameter 22mm Wall thickness	MD00/2319 0001/4	99.5.7	Lloyd's Register
DNV	Welded Pipe and Tube	Steel Tubes and Pipes for ordinary pressure system	-	Max 610mm diameter 22mm Wall thickness	ANM-988	99.7.20	Det Norske Veritas
GL	unalloyed welded steel pipes	Steel pipes of strength Category GL360, GL410, GL510, according to GL Rules for materials chapter2, section2.8	-	O.D 216.3-609.6mm W.T 3.2-22mm	W2 1047HH1	2000.6.9	Germanischer Lloyd
SHELL Vendor	-	SHELL Vendor	APL G-B-X70	O.D 8" - 24" W.T : max 22mm	-	2000.4.1	SHELL

Inchon Plant





Daebul Plant





## Main Production and Specification Comparison List

Class	KOREA	JAPAN	U.S.A	ENGLAND	USE
Carbon steel Pipes for ordinary piping	(KS D 3507 / SPP)	(JS G 3452 / SGP)	ASTM A53	BS 1387	For Use Conveying Gas, Water and Oil for Low Pressure Service
	(KS D 3537 / SPPW)	(JS G 3442 / SGPW)	ASTM A53	BS 1387	For Water Piping from the Water Sources
Carbon steel pipes for pressure application	(KS D 3562 / SPPS)	(JS G 3454/STPG)	ASTM A53, API 5L	BS 3601	Carbon Steel Pipes for Pressure Service under 350°C
Carbon steel pipes for structural purposes	(KS D 3517 / STKM)	(JS G 3445/STKM)	ASTM A513	BS 980 BS 6323	For Building, Machinery
	(KS D 3566 / STK)	(JS G 3444/STK)	ASTM A500	BS 1139 BS 4848	For Buildings, Bridge, and general Structural Purposes
	(KS D 3568 / SPGR)	(JS G 3466/STKR)	ASTM A600	BS 4848	Square and Rectangular Tubing for Structural Purposes
Line pipes	-	-	API (PSL1, 2)	-	Line Pipes for Oil & Gas
Casting and Tubing	-	-	API 5CT	-	For Producing Operation in both Oil and Natural Gas Industries.
Rigid steel conduit	(KS C 8401)	(JS C 8305)	ULG ANSI C90.1	BS 31	For Electric Wiring
Carbon Steel Tubes for Heat Transfer	(KS D 3563/STBH)	(JS G 3461/STB)	ASTM A178,A214, A226	BS 3069 BS 3605	For Heat Exchange, Such as Water Tubes, Smoke Tubes, Superheater Tubes and Air Preheater Tubes of Boilers or Heat Exchanger Tubes, Condenser Tubes and Catalyst Tubes in the chemical and Petroleum Industries.

BS(British Standards Association)

ASTM(American Society for Testing and Materials).

Please contact our sales department for different standard from above our main production list.



**HUSTEEL**

# HUSTEEL LIST OF SPECIFICATION

Specifications		Application	Chemical Requirement(%)					Physical Re				
			C (Max)	Si (Max)	Mn (Max)	P (Max)	S (Max)	Others	Tensile Strength(MN)	Yield Streng		
BS 1139	-	Pipe Scaffolding	0.20	0.30	-	0.060	0.050		340~460 N/rd (34.7~46.9kg/rd)	210 N/ (21.4kg/)		
BS 1387	L	Carbon Steel pipes for ordinary piping	0.20	-	1.20	0.045	0.045		(32.7~46.9kg/rd)	195 N/ (19.9kg/)		
	M		0.20	-	1.20	0.045	0.045					
	H		0.20	-	1.20	0.045	0.045					
BS 3059(Part 1)	320	For Boiler	0.16	0.35	0.30~0.70	0.040	0.040		320~460 N/rd (32.6~46.9kg/rd)	195 N/ (19.9kg/)		
BS 3601	320	Pipes for Pressure Service	0.16	-	0.30~0.70	0.040	0.040		320~460 N/rd (32.6~46.9kg/rd)	195 N/ (19.9kg/)		
	360		0.17	0.35	0.40~0.80	0.040	0.040		360~500 N/rd (36.7~51.0kg/rd)	235 N/ (24.0kg/)		
	430		0.21	0.35	0.40~1.20	0.040	0.040		430~510 N/rd (43.6~51.0kg/rd)	275 N/ (28.0kg/)		
BS 6323 Part 5 Type KM	ERW 1	Carbon steel pipes for Mechanical Structural Purposes and General Structural Purposes	0.13	-	0.60	0.050	0.050		300 N/rd (30.6 kg/rd)	200 N/ (20.6kg/)		
	ERW 2		0.16	-	0.70	0.050	0.050		340 N/rd (34.7 kg/rd)	250 N/ (25.5kg/)		
	ERW 3		0.20	0.35	0.90	0.050	0.050		400 N/rd (40.8 kg/rd)	300 N/ (30.6kg/)		
	ERW 4		0.25	0.35	1.20	0.050	0.050		450 N/rd (45.9 kg/rd)	350 N/ (35.7kg/)		
	ERW 5		0.23	0.50	1.50	0.050	0.050		500 N/rd (51.0 kg/rd)	420 N/ (42.6kg/)		
API 5L (PSL 1)	A25	Line Pipe	Class I	0.21	-	0.60	0.030	0.030		45,000 psi (31.6 kg/rd)	25,000 (17.6 kg)	
			Class II	0.21	-	0.60	0.045 ~0.090	0.030		45,000 psi (31.6 kg/rd)	25,000 (17.6 kg)	
	A		0.22	-	0.90	0.030	0.030		48,000 psi (33.7 kg/rd)	30,000 (21.1 kg)		
	B		0.26	-	1.20	0.030	0.030		60,000 psi (42.2 kg/rd)	38,000 (29.6 kg)		
	x42		0.25	-	1.30	0.030	0.030		60,000 psi (42.2 kg/rd)	42,000 (29.5 kg)		
	x46		0.26	-	1.40	0.030	0.030		63,000 psi (44.3 kg/rd)	46,000 (32.3 kg)		
	x52		0.26	-	1.40	0.030	0.030		66,000 psi (46.4 kg/rd)	52,000 (36.6 kg)		
	x56		0.26	-	1.40	0.030	0.030		71,000 psi (49.9 kg/rd)	56,000 (39.4 kg)		
	x60		0.26	-	1.40	0.030	0.030		75,000 psi (52.7 kg/rd)	60,000 (42.2 kg)		
	x65		0.26	-	1.45	0.030	0.030		77,000 psi (54.1 kg/rd)	65,000 (45.7 kg)		
	x70		0.26	-	1.65	0.030	0.030		87,000 psi (57.7 kg/rd)	70,000 (49.2 kg)		
	API 5L (PSL 2)		B	Line Pipe	0.22	-	1.30	0.025	0.015		110,000 psi(77.3 kg/rd) ~80,000(42.2 kg/rd)	65,000 psi(45 ~35,000(28
			x42		0.22	-	1.30	0.025	0.015		110,000 psi(77.3 kg/rd) ~80,000(42.2 kg/rd)	72,000 psi(50 ~42,000(29
x46		0.22	-		1.40	0.025	0.015		110,000 psi(77.3 kg/rd) ~83,000(44.3 kg/rd)	76,000 psi(53 ~46,000(32		
x52		0.22	-		1.40	0.025	0.015	CE(Pcm) ≤0.25%	110,000 psi(77.3 kg/rd) ~66,000(46.4 kg/rd)	77,000 psi(54 ~52,000(36		
x56		0.22	-		1.40	0.025	0.015		110,000 psi(77.3 kg/rd) ~71,000(49.9 kg/rd)	79,000 psi(55 ~56,000(39		
x60		0.22	-		1.40	0.025	0.015	CE(HW) ≤0.43%	110,000 psi(77.3 kg/rd) ~75,000(52.7 kg/rd)	82,000 psi(57 ~60,000(42		
x65		0.22	-		1.45	0.025	0.015		110,000 psi(77.3 kg/rd) ~77,000(54.1 kg/rd)	87,000 psi(61 ~65,000(45		
x70		0.22	-		1.65	0.025	0.015		110,000 psi(77.3 kg/rd) ~82,000(57.7 kg/rd)	90,000 psi(63 ~70,000(49		
x80		0.22	-		1.85	0.025	0.015		120,000 psi(84.4 kg/rd) ~90,000(63.3 kg/rd)	100,000 psi(71 ~80,000(56		
API SCT	H-40	Casing & Tubing	-	-	-	0.03	0.03		60,000 psi(42.2 kg/rd)	45,000~80 (28.1~56.7		
	J-55		-	-	-	0.03	0.03		75,000 psi(52.7 kg/rd)	55,000~80 (38.7~56.7		
	K-55		-	-	-	0.03	0.03		95,000 psi(66.8 kg/rd)	55,000~80 (38.7~56.7		
	N-80		-	-	-	0.03	0.03		100,000 psi(70.3 kg/rd)	60,000~115 (36.2~71.2		

Elongation(Min,%)		Flattening Test	Bend Test	Hydrostatic Test(NDT)	Others																																	
Longitudinal Direction	Transverse Direction																																					
22			Back : 180° × 6D Conv : 90° × 8D		• Copper sulfate test:4times(1minute) • Zn Coating Weight:300g/㎡ min																																	
20		Larger than DN 50 Weld portion : H=0.75D The other side of weld portion : H=0.6D	DN 50 and Smaller Back : 180° × 6D Conv : 90° × 8D	50Bar or NDT	• Copper sulfate test: 4 times(1minute)																																	
25		$H = \frac{(1+C)t}{C+D} \times 0.10$		$P = \frac{20s}{D}$ or NDT P : Test Pressure(bar) D : Outside Diameter(mm) s : Specified thickness(mm)	• Drift expanding test • Full Body Normalizing																																	
25		$H = \frac{(1+C)t}{C+D}$ Or Yield portion • C : Coefficient <table border="1"> <tr> <th>Yield portion</th> <th>0.025</th> <th>0.10</th> </tr> <tr> <td>300</td> <td>0.025</td> <td>0.05</td> </tr> <tr> <td>400</td> <td>0.025</td> <td>0.08</td> </tr> </table>	Yield portion	0.025	0.10	300	0.025	0.05	400	0.025	0.08		$P = \frac{20Sa}{D}$ or NDT	• Heat treatment on the weld seam area																								
Yield portion	0.025		0.10																																			
300	0.025		0.05																																			
400	0.025		0.08																																			
25		H=0.66D		50 bar or P = 20Sa P : Test Pressure(bar) D : Outside Diameter(mm) s : Specified thickness(mm) S : 60% of the specified minimum Yield strength(N/mm <sup>2</sup> ) or NDT	• Minimum expansion for drift expanding test, • Type GKM, GZF : annealing • Type NKM, NZF : Normalizing																																	
25		H=0.75D																																				
22		H=0.85D																																				
		H=0.85D																																				
		H=0.85D																																				
D/t ≤ 20			2 1/4 and smaller 90° × 12D																																			
		Weld portion : H=3/4D The other side of weld portion : H=3/5D																																				
		Weld portion : H=2/3D The other side of weld portion : H=1/3D Weld ductility Test $H = \frac{3.0t}{0.07 + 3t/D}$ less than ×52 $H = \frac{3.0t}{0.05 + 3t/D}$ ×52 and higher		$p = \frac{2st}{D}$ P = hydrostatic test Pressure(psi) S = fiber stress, equal to a percentage of specified min. yield strength for the various sizes as shown in the tabulation below.(psi) t : specified thickness(inch) D : Outside Diameter(inch) and NDT	• Heat treatment on the weld seam area. • Metallographic Examination • Fracture Toughness Test(PSL2)																																	
				<table border="1"> <thead> <tr> <th>Size</th> <th>Size Description</th> <th colspan="2">Percent of specified min. yield strength</th> </tr> <tr> <th></th> <th></th> <th>Standard Test Pressure</th> <th>Alternate Test Pressure</th> </tr> </thead> <tbody> <tr> <td>ND</td> <td>3 5/16</td> <td>50</td> <td>75</td> </tr> <tr> <td>A</td> <td>2 3/8 and larger</td> <td>50</td> <td>75</td> </tr> <tr> <td>B</td> <td>-</td> <td>50</td> <td>75</td> </tr> <tr> <td rowspan="4">X42 - X80</td> <td>5 NPS and smaller</td> <td>50</td> <td>75</td> </tr> <tr> <td>6 5/8 and 8 5/8</td> <td>75</td> <td>75</td> </tr> <tr> <td>10 2 1/4 to 16nd</td> <td>50</td> <td>75</td> </tr> <tr> <td>20 and larger</td> <td>50</td> <td>75</td> </tr> </tbody> </table>	Size	Size Description	Percent of specified min. yield strength				Standard Test Pressure	Alternate Test Pressure	ND	3 5/16	50	75	A	2 3/8 and larger	50	75	B	-	50	75	X42 - X80	5 NPS and smaller	50	75	6 5/8 and 8 5/8	75	75	10 2 1/4 to 16nd	50	75	20 and larger	50	75	
Size	Size Description	Percent of specified min. yield strength																																				
		Standard Test Pressure	Alternate Test Pressure																																			
ND	3 5/16	50	75																																			
A	2 3/8 and larger	50	75																																			
B	-	50	75																																			
X42 - X80	5 NPS and smaller	50	75																																			
	6 5/8 and 8 5/8	75	75																																			
	10 2 1/4 to 16nd	50	75																																			
	20 and larger	50	75																																			
		D/t ≥ 16, H=0.5D D/t < 16, H=D(0.83-0.0205 D/t)		P = 20t/(Y+1)Q And NDT, P=hydrostatic test pressure in psi t = a factor of 0.5 or 0.6, Y = specified yield strength for the pipeline in psi Q = specified wall thickness in inch D = specified outside diameter in inch	• Heat treatment on the weld seam area • Fracture Toughness Test																																	
		D/t ≥ 16, H=0.65D 3.93 ≤ D/t < 16, H=D(0.98-0.0205 D/t) D/t < 3.93, H=D(1.104-0.6518 D/t)																																				
		9.5D/t ≤ 28, H = D(1.074-0.0194 D/t)																																				

# HUSTEEL LIST OF SPECIFICATION

Specifications		Application	Chemical Requirement(%)					Physical Requirements			
			C (Max)	Si (Max)	Mn (Max)	P (Max)	S (Max)	Others	Tensile Strength(Min)	Yield Strength(Min)	Elongation
ASTM A53	A	Carbon Steel pipes for Ordinary piping	0.25	-	0.95	0.05	0.045	Cu,Cr,Ni ≤0.08 Mn,Si,Al ≤0.08	48,000psi (33.7kg/cm <sup>2</sup> )	30,000psi (21.1kg/cm <sup>2</sup> )	-
	B		0.30	-	1.20	0.05	0.045		60,000psi (42.2kg/cm <sup>2</sup> )	35,000psi (24.6kg/cm <sup>2</sup> )	
ASTM A135	A	Liquid, Gas or Vapor	0.25	-	0.95	0.035	0.035	-	33Mpa (33.6kg/cm <sup>2</sup> )	207Mpa (21.1kg/cm <sup>2</sup> )	-
	B		0.30	-	1.20	0.035	0.035	-	414Mpa (42.2kg/cm <sup>2</sup> )	241Mpa (24.6kg/cm <sup>2</sup> )	
ASTM A178	A	Boiler Tube	0.06-0.18	-	0.27-0.63	0.035	0.035	-	325Mpa (33.1kg/cm <sup>2</sup> )	180Mpa (18.4kg/cm <sup>2</sup> )	-
	C		0.35	-	0.80	0.035	0.035	-	415Mpa (42.3kg/cm <sup>2</sup> )	255Mpa (25.0kg/cm <sup>2</sup> )	
ASTM A252	Grade I	Steel pipe piles	-	-	-	0.05	-	-	50,000psi (35.7kg/cm <sup>2</sup> )	30,000psi (21.1kg/cm <sup>2</sup> )	-
	Grade II		-	-	-	0.05	-	-	60,000psi (42.7kg/cm <sup>2</sup> )	35,000psi (24.6kg/cm <sup>2</sup> )	
	Grade III		-	-	-	0.05	-	-	66,000psi (46.4kg/cm <sup>2</sup> )	45,000psi (31.6kg/cm <sup>2</sup> )	
ASTM A500	A	Structural Carbon Steel Pipes in Round	0.30	-	-	0.045	0.045	Cu≤0.20 When required	45,000psi (31.6kg/cm <sup>2</sup> )	30,000psi (21.2kg/cm <sup>2</sup> )	-
	B		0.30	-	-	0.045	0.045		58,000psi (40.8kg/cm <sup>2</sup> )	42,000psi (29.5kg/cm <sup>2</sup> )	
	C		0.27	-	1.40	0.045	0.045		62,000psi (43.6kg/cm <sup>2</sup> )	46,000psi (32.3kg/cm <sup>2</sup> )	
	D		0.30	-	-	0.045	0.045		55,000psi (40.6kg/cm <sup>2</sup> )	36,000psi (25.3kg/cm <sup>2</sup> )	
ASTM A500	A	Structural Carbon Steel Pipes in Square & Rectangular	0.30	-	-	0.045	0.045	Cu≤0.20 When required	45,000psi (31.6kg/cm <sup>2</sup> )	38,000psi (27.4kg/cm <sup>2</sup> )	-
	B		0.30	-	-	0.045	0.045		58,000psi (40.8kg/cm <sup>2</sup> )	46,000psi (32.3kg/cm <sup>2</sup> )	
	C		0.27	-	1.40	0.045	0.045		62,000psi (43.6kg/cm <sup>2</sup> )	50,000psi (35.2kg/cm <sup>2</sup> )	
	D		0.30	-	-	0.045	0.045		58,000psi (40.8kg/cm <sup>2</sup> )	36,000psi (25.3kg/cm <sup>2</sup> )	
ASTM A539 (Type IV)	A	Water-well piling pipe	-	-	-	0.050	0.060	-	48,000psi (33.8kg/cm <sup>2</sup> )	30,000psi (21.1kg/cm <sup>2</sup> )	-
	B		-	-	-	0.050	0.060		60,000psi (42.2kg/cm <sup>2</sup> )	35,000psi (24.6kg/cm <sup>2</sup> )	
ASTM A795	A	Carbon Steel pipes for fire protection use	0.25	-	0.95	0.035	0.035	-	-	-	-
	B		0.30	-	1.20	0.035	0.035		-	-	

Elongation (Min. %)	Flattening Test	Bend Test	Hydrostatic Test (NDT)	Others
$45.00 \times \frac{A^2}{D^2}$ Minimum elongation in 2 in Gage - Sectional area of the test specimen in sq in Specified minimum ultimate tensile strength in Psi	Weld Portion : H=2/3D The other side of weld portion : H=1/3D	For Pipe NPS 2 and under $90^\circ \times 12D$ $180^\circ \times 8D$ When order for close coiling	Specified respectively in size and grade (P=2st/D) The maximum pressure NPS 3 & ≤ : P = 2,500Psi NPS > 3 : P = 2,800Psi NDT and NDT(NPS 2 and over)	<ul style="list-style-type: none"> <li>Zn Coating weight : 550g/m<sup>2</sup>(min)</li> <li>Heat treatment on the Weld Seam area(Grade B)</li> </ul>
35 E=5R+17.50, t=(inch)	Weld Portion : H=2/3D The other side of weld portion : H=1/3D		$P = \frac{2st}{D}$ or NDT S : Grade A 18,000Psi Grade B 21,000Psi	
35 E=4R+15.00, t=(inch)				
35	$H = \frac{(1+e)t}{e + 1/D}$		p = 2206 t/D or NDT P : hydrostatic test Pressure(Mpa) t : specified wall thickness(mm) D : specified outside diameter(mm)	<ul style="list-style-type: none"> <li>Full Body Normalizing</li> <li>Flange Test</li> <li>Reverse Flattening Test</li> <li>Crush test(When required)</li> </ul>
30 e:0.07(Gr C) e:0.09(Gr A)				
30 E=4R+15.00, t=(inch)	$H = \frac{(1+e)t}{e + 1/D}$			If necessary, Stress relieved, annealed
25 E=4R+12.50, t=(inch)				
20 E=3R+10.00, t=(inch)				
25				
23				
21				
23	$H = \frac{(1+e)t}{e + 1/D}$			If necessary, Stress relieved, annealed
25 A : e = 0.09 B : e = 0.07 C : e = 0.06				
23				
21				
23				
23				
$45.00 \times \frac{A^2}{D^2}$ Minimum elongation in 2 in Gage - Sectional area of the test specimen in sq in Specified minimum ultimate tensile strength in Psi	Weld Portion : H=2/3D The other side of weld portion : H=1/2D		In accordance with the specified hydrostatic pressures	<ul style="list-style-type: none"> <li>Zn Coating weight : 550g/m<sup>2</sup>(min)</li> </ul>
	Weld Portion : H=2/3D The other side of weld portion : H=1/2D		In accordance with the Specified hydrostatic Pressures or NDT	<ul style="list-style-type: none"> <li>Zn Coating weight : 460g/m<sup>2</sup>(min)</li> </ul>

# HUSTEEL LIST OF SPECIFICATION

Standard Specifications	Application	Chemical Requirement(%)					Other	Tensile Strength (kgf/cm <sup>2</sup> )
		C(max)	Si(max)	Mn(max)	P(max)	S(max)		
KS D 1507 (KS D 1452)	21-2001 Flat	-	-	-	0.06	0.03	-	50
KS D 1508	3000 Flat	-	-	-	0.04	0.03	-	50
KS D 1509	1000 Flat	0.3	0.3	0.05	0.03	0.03	-	50
KS D 1512 (KS D 1514)	3000-36 1000-1000	0.3	0.3	0.05-0.05	0.03	0.03	-	50
	36-36 1000-1000	0.07	0.3	0.05-0.05	0.03	0.03	-	70
	36-36 1000-1000	0.3	0.3	0.05-0.05	0.03	0.03	-	50
KS D 1513 (KS D 1515)	1700-18 1000-1000	0.02	0.3	0.05-0.05	0.03	0.03	-	50
	1700-18 1000-1000	0.3	0.3	0.05-0.05	0.03	0.03	-	50
KS D 1517 (KS D 1519)	1700-18 1000-1000	0.02	0.3	0.05-0.05	0.03	0.03	-	50
KS D 1518 (KS D 1520)	1700-18 1000-1000	0.3	0.3	0.05-0.05	0.03	0.03	-	50
KS D 1521 (KS D 1523)	Flat	KS D 1521-1523 (KS D 1525)					-	50
KS D 1524 (KS D 1526)	Flat	KS D 1524-1526 (KS D 1530)					-	50
KS D 1528 (KS D 1530)	Flat	KS D 1528-1530 (KS D 1534)					-	50
KS D 1538 (KS D 1540)	3000-36	0.3	0.3	0.05-0.05	0.03	0.03	-	50
	36-36	0.3	0.3	0.05-0.05	0.03	0.03	-	50
	36-36	0.3	0.3	0.05-0.05	0.03	0.03	-	50
KS D 1548 (KS D 1550)	3000-36 Flat	0.3	0.3	0.05-0.05	0.03	0.03	-	50
	36-36 Flat	0.3	0.3	0.05-0.05	0.03	0.03	-	50
	36-36	0.3	0.3	0.05-0.05	0.03	0.03	-	50
KS D 1558 (KS D 1560)	3000-36 Flat	0.3	0.3	0.05-0.05	0.03	0.03	-	50
	36-36 Flat	0.3	0.3	0.05-0.05	0.03	0.03	-	50



Weld Length (mm)	Physical Requirement		Flattening Test		Bend Test	Hydrostatic Test(NDT) P = Test Pressure(kg/cm) S = Fiber Stress(kg/cm)	Others																					
	Elongation Min(%)		H = Distance between Flattening Plate D = Outside Diameter T = Weld Thickness																									
	Specimen type																											
	11, 12	5																										
	30	25	H = 2/3D		Size 50A and Under 90° x 6D	P = 25kg / cm or NDT	Copper Sulfate test: 5 times (1 minute)																					
	30	25	H = 2/3D		Size 50A and Under 90° x 8D	P = 25kg / cm or NDT	• In Coring High (50g/v/min) • Copper Sulfate test (5 times 1 minute) • Alkal test: 100 minutes																					
21	30	25	H = 2/3D		Size 40A and Under 90° x 6D	P = 30kg / cm and NDT	Normalizing On the Weld Seam area																					
22	30	25	Weld Portion : H = 2/3D The Other side of Weld Portion :		Size 40A and Under 90° x 6D	<table border="1"> <tr> <td colspan="7">Unit: kg/cm<sup>2</sup></td> </tr> <tr> <td>SCH. NO</td> <td>10</td> <td>20</td> <td>30</td> <td>40</td> <td>60</td> <td>80</td> </tr> <tr> <td>test pressure</td> <td>20</td> <td>35</td> <td>50</td> <td>60</td> <td>90</td> <td>100</td> </tr> </table> or NDT	Unit: kg/cm <sup>2</sup>							SCH. NO	10	20	30	40	60	80	test pressure	20	35	50	60	90	100	
Unit: kg/cm <sup>2</sup>																												
SCH. NO	10	20	30	40	60	80																						
test pressure	20	35	50	60	90	100																						
25	25	20	H = 1/3D																									
18	35	-	$H = \frac{(1+e)T}{e+1/D}$	e = 0.03	$P = \frac{200st}{D}$ $S = 60\% \times Yp$ Yp = yield Point or NDT	• Full Body Normalizing • Flare Test • Reverse Flattening Test																						
26	25	-		e = 0.08																								
30	25	-		e = 0.07																								
					90° x 4D(G16, G22) 90° x 5D(G28)		Copper Sulfate test: 3 times (1 minute)																					
	30	25	H = 2/3D		90° x 6D Size 50A and Under	P = 25kg/cm or NDT	• According to MSD357 • Corrosion Resistance Test																					
			H = 2/3D		Size 50A and Under 90° x 8D		• Pinhole test • Adhesion test • Impact test • Water quality test																					
	30	25	H = 2/3D		Outside Diameter 50mm and under 90° x 8D																							
24	23	18	H = 2/3D		90° x 6D																							
26	15	10	H = 7/8D		90° x 6D																							
32	23	18	H = 7/8D		90° x 6D																							
40	20	16	H = 7/8D		90° x 6D																							
25	-	23																										
38	-	23																										

Standard Specifications		Application	Chemical Requirement(%)					
			C(max)	Si(max)	Mn(max)	P(max)	S(max)	Other
KS D 3517 (KS G 3445)	STKM 11A	For Mechanical Structural Purposes	0.12	0.35	0.60	0.040	0.040	-
	STKM 12A							
	STKM 12B		0.20	0.35	0.60	0.040	0.040	-
	STKM 12C							
	STKM 13A							
	STKM 13B		0.25	0.35	0.30-0.90	0.040	0.040	-
	STKM 13C							
	STKM 14A							
	STKM 14B		0.30	0.35	0.30-1.00	0.040	0.040	-
	STKM 14C							
	STKM 15A							
	STKM 15C		0.25-0.35	0.35	0.30-1.00	0.040	0.040	-
	STKM 16A							
	STKM 16C		0.35-0.45	0.40	0.40-1.00	0.040	0.040	-
	STKM 17A							
	STKM 17C		0.45-0.55	0.40	0.40-1.00	0.040	0.040	-
	STKM 18A							
	STKM 18B		0.18	0.55	1.50	0.040	0.040	-
STKM 18C								

Physical Requirement			Flattening Test H = Distance between Flattening Plate D = Outside Diameter T = Wall Thickness	Bend Test	Hydrostatic Test(NDT) P = Test Pressure(kg/cm <sup>2</sup> ) S = Fiber Stress(kg/cm <sup>2</sup> )	Others
Yield Strength Min (kg/cm <sup>2</sup> )	Elongation Min(%)					
	Specimen type					
	11, 12	5				
-	35	30	1/2D	Outside Diameter 50mm and under 180° x 4D		
18	35	30	2/3D	90° x 6D		
28	25	20	2/3D	90° x 6D		
36	20	15	-	-		
22	30	25	2/3D	90° x 6D		
31	20	15	3/4D	90° x 6D		
39	15	10	-	-		
25	25	20	3/4D	90° x 6D		
36	15	10	7/8D	90° x 8D		
42	15	10	-	-		
28	22	17	3/4D	90° x 6D		
44	12	7	-	-		
33	20	15	7/8D	90° x 8D		
47	12	7	-	-		
35	20	15	7/8D	90° x 8D		
40	10	5	-	-		
28	25	20	7/8D	90° x 6D		
32	23	18	7/8D	90° x 6D		
39	15	10	-	-		

# HUSTEEL API 5CT Casing & Tubing

## 1) Tubing

Size	Outside Diameter(D)		Wall Thickness(t)		Weight(W <sub>pe</sub> )		Hydrostatic test Pressure(psi)				
	in	mm	in	mm	lb/ft	kg/m		H40	.55	N80	L80
1.050	1.050	26.7	0.113	2.9	1.13	1.70	Std	3000	3000	3000	3000
							Alt	6900	9500	-	-
	1.050	26.7	0.154	3.9	1.48	2.19	Std	3000	3000	3000	3000
							Alt	9400	10000	-	-
1.315	1.315	33.4	0.133	3.4	1.68	2.52	Std	3000	3000	3000	3000
							Alt	6500	8500	-	-
	1.315	33.4	0.179	4.5	2.17	3.21	Std	3000	3000	3000	3000
							Alt	8700	10000	-	-
1.660	1.660	42.2	0.125	3.2	2.05	3.08	Std	3000	3000	-	-
							Alt	4800	6600	-	-
	1.660	42.2	0.140	3.6	2.27	3.43	Std	3000	3000	3000	3000
							Alt	5400	7400	-	-
1.660	42.2	0.191	4.9	3.00	4.51	Std	3000	3000	3000	3000	
						Alt	7400	10000	-	-	
1.900	1.900	48.3	0.125	3.2	2.37	3.56	Std	3000	3000	-	-
							Alt	4200	5800	-	-
	1.900	48.3	0.145	3.7	2.72	4.07	Std	3000	3000	3000	3000
							Alt	4500	6100	-	-
	1.900	48.3	0.200	5.1	3.63	5.43	Std	3000	3000	3000	3000
							Alt	6100	9300	-	-
	1.900	48.3	0.250	6.4	4.41	6.60	Std	-	-	-	3000
							Alt	-	-	-	-
1.900	48.3	0.300	7.6	5.13	7.63	Std	-	-	-	3000	
						Alt	-	-	-	-	
2 3/8	2.375	60.3	0.167	4.2	3.94	5.81	Std	3000	3000	3000	3000
							Alt	4500	6200	-	-
	2.375	60.3	0.190	4.8	4.44	6.57	Std	3000	3000	3000	3000
							Alt	5100	7000	-	-
	2.375	60.3	0.254	6.5	5.76	8.62	Std	-	-	3000	3000
							Alt	-	-	-	-
	2.375	60.3	0.295	7.5	6.56	9.77	Std	-	-	-	3000
							Alt	-	-	-	-
2.375	60.3	0.336	8.5	7.32	10.86	Std	-	-	-	3000	
						Alt	-	-	-	-	
2 7/8	2.875	73.0	0.217	5.5	6.17	9.16	Std	3000	3000	3000	3000
							Alt	4800	6600	-	-
	2.875	73.0	0.276	7.0	7.67	11.39	Std	-	-	3000	3000
							Alt	-	-	-	-
	2.875	73.0	0.308	7.8	8.45	12.54	Std	-	-	3000	3000
							Alt	-	-	-	-
	2.875	73.0	0.349	8.6	9.21	13.66	Std	-	-	-	3000
							Alt	-	-	-	-
2.875	73.0	0.392	10.0	10.40	15.54	Std	-	-	-	3000	
						Alt	-	-	-	-	
2.875	73.0	0.440	11.2	11.45	17.07	Std	-	-	-	3000	
						Alt	-	-	-	-	

Size	Outside Diameter(D)		Wall Thickness(t)		Weight(Wipe)		Hydrostatic test Pressure(psi)					
	In	mm	In	mm	lb/ft	kg/m		H40	J55	N80	L80	
3 1/2	3.500	88.9	0.216	5.5	7.58	11.31	Std	3000	3000	3000	3000	
							Alt	3900	5400	-	-	
	3.500	88.9	0.254	6.5	8.81	13.21	Std	3000	3000	3000	3000	
							Alt	4600	6400	-	-	
	3.500	88.9	0.289	7.3	9.92	14.69	Std	3000	3000	3000	3000	
							Alt	5300	7300	-	-	
	3.500	88.9	0.375	9.5	12.53	18.60	Std	-	-	3000	3000	
							Alt	-	-	-	-	
	3.500	88.9	0.430	10.9	14.11	20.97	Std	-	-	-	3000	
							Alt	-	-	-	-	
	3.500	88.9	0.476	12.1	15.39	22.92	Std	-	-	-	3000	
							Alt	-	-	-	-	
	3.500	88.9	0.530	13.5	16.83	25.10	Std	-	-	-	3000	
							Alt	-	-	-	-	
4	4.000	101.6	0.226	5.7	9.12	13.48	Std	3000	3000	3000	3000	
							Alt	3600	5000	-	-	
	4.000	101.6	0.262	6.7	10.47	15.68	Std	3000	3000	3000	3000	
							Alt	4200	5800	-	-	
	4.000	101.6	0.330	8.4	12.95	19.31	Std	-	-	-	3000	
							Alt	-	-	-	-	
	4.000	101.6	0.415	10.5	15.90	23.59	Std	-	-	-	3000	
							Alt	-	-	-	-	
	4.000	101.6	0.500	12.7	18.71	27.84	Std	-	-	-	3000	
							Alt	-	-	-	-	
	4.000	101.6	0.610	15.5	22.11	32.91	Std	-	-	-	3000	
							Alt	-	-	-	-	
	4 1/2	4.500	114.3	0.271	6.9	12.25	18.27	Std	3000	3000	3000	3000
								Alt	3900	5300	-	-
4.500		114.3	0.337	8.6	15.00	22.42	Std	-	-	-	3000	
							Alt	-	-	-	-	
4.500		114.3	0.380	9.7	16.77	25.02	Std	-	-	-	3000	
							Alt	-	-	-	-	
4.500		114.3	0.430	10.9	18.71	27.79	Std	-	-	-	3000	
							Alt	-	-	-	-	
4.500		114.3	0.500	12.7	21.38	31.82	Std	-	-	-	3000	
							Alt	-	-	-	-	
4.500		114.3	0.560	14.2	23.59	35.05	Std	-	-	-	3000	
							Alt	-	-	-	-	
4.500		114.3	0.630	16.0	26.06	38.79	Std	-	-	-	3000	
							Alt	-	-	-	-	

**2) Casing**

Size	Outside Diameter(D)		Wall Thickness(t)		Weight(Wipe)		Hydrostatic test Pressure(psi)					
	In	mm	In	mm	lb/ft	kg/m		H40	J55/K55	M55	N80	L80
4 1/2	4.500	114.3	0.205	5.2	9.41	13.99	Std	2900	3000	3000	-	-
							Alt	-	4000	-	-	-
	4.500	114.3	0.224	5.7	10.24	15.27	Std	-	3000	3000	-	-
							Alt	-	4400	-	-	-
	4.500	114.3	0.250	6.4	11.36	17.03	Std	-	3000	3000	3000	3000
							Alt	-	4900	-	-	-
	4.500	114.3	0.290	7.4	13.05	19.51	Std	-	-	3000	3000	3000
							Alt	-	-	-	-	-
	4.500	114.3	0.337	8.6	15.00	22.42	Std	-	-	-	-	-
							Alt	-	-	-	-	-

 Note 1. 1psi = 0.07031kg/cm<sup>2</sup> 2. 1lb/ft = 0.45359kg/m

Size	Outside Diameter(D)		Wall Thickness(t)		Weight(W <sub>pe</sub> )		Hydrostatic test Pressure(psi)					
	in	mm	in	mm	lb/ft	kg/m		H40	55/M55	M65	N80	L80
6 5/8	6.625	168.3	0.288	7.3	19.51	28.98	Std	2800	3000	3000	-	-
							All	-	3800	-	-	-
	6.625	168.3	0.352	8.9	23.60	34.98	Std	-	3000	3000	3000	3000
							All	-	4700	-	-	-
	6.625	168.3	0.417	10.6	27.67	41.22	Std	-	-	3000	3000	3000
							All	-	-	-	-	-
6.625	168.3	0.475	12.1	31.23	46.61	Std	-	-	-	3000	3000	
						All	-	-	-	-	-	
8 5/8	8.625	219.1	0.264	6.7	23.60	35.09	Std	-	2700	3000	-	-
							All	-	-	-	-	-
	8.625	219.1	0.304	7.7	27.04	40.14	Std	2300	-	-	-	-
							All	-	-	-	-	-
	8.625	219.1	0.352	8.9	31.13	46.13	Std	2600	3000	3000	-	-
							All	-	3600	-	-	-
	8.625	219.1	0.400	10.2	35.17	52.55	Std	-	3000	3000	3000	3000
							All	-	4100	-	-	-
	8.625	219.1	0.450	11.4	39.33	58.39	Std	-	-	3000	3000	3000
							All	-	-	-	-	-
	8.625	219.1	0.500	12.7	43.43	64.64	Std	-	-	3000	3000	3000
							All	-	-	-	-	-
8.625	219.1	0.557	14.1	49.04	71.28	Std	-	-	-	3000	3000	
						All	-	-	-	-	-	
10 3/4	10.750	273.1	0.279	7.1	31.23	46.57	Std	1200	-	-	-	-
							All	1700	-	-	-	-
	10.750	273.1	0.350	8.9	38.91	57.99	Std	1600	2100	3000	-	-
							All	2100	2900	-	-	-
	10.750	273.1	0.400	10.2	44.26	66.13	Std	-	2500	3900	-	-
							All	-	3300	-	-	-
	10.750	273.1	0.450	11.4	49.55	73.57	Std	-	2800	3000	3000	3000
							All	-	3700	-	-	-
	10.750	273.1	0.495	12.6	54.26	80.94	Std	-	-	3000	3000	3000
							All	-	-	-	-	-
	10.750	273.1	0.545	13.8	59.45	88.24	Std	-	-	-	-	-
							All	-	-	-	-	-
10.750	273.1	0.595	15.1	64.99	96.07	Std	-	-	-	-	-	
						All	-	-	-	-	-	
10.750	273.1	0.672	17.1	72.40	107.95	Std	-	-	-	-	-	
						All	-	-	-	-	-	
10.750	273.1	0.734	18.6	78.99	116.73	Std	-	-	-	-	-	
						All	-	-	-	-	-	
10.750	273.1	0.797	20.2	84.90	125.98	Std	-	-	-	-	-	
						All	-	-	-	-	-	
16	16.000	406.4	0.315	9.5	62.64	92.98	Std	1100	-	-	-	-
							All	-	-	-	-	-
	16.000	406.4	0.438	11.1	72.86	108.20	Std	-	1800	2800	-	-
							All	-	-	-	-	-
	16.000	406.4	0.495	12.6	82.05	122.36	Std	-	2000	3000	-	-
							All	-	-	-	-	-
16.000	406.4	0.656	16.7	107.60	160.49	Std	-	-	-	3000	-	
						All	-	-	-	-	-	
20	20.000	508.0	0.438	11.1	91.59	136.01	Std	1100	1400	2300	-	-
							All	-	-	-	-	-
	20.000	508.0	0.500	12.7	104.23	155.12	Std	-	1600	2600	-	3000
							All	-	-	-	-	-
	20.000	508.0	0.635	16.1	131.45	195.30	Std	-	2100	-	-	-
							All	-	-	-	-	-

Note 1. 1psi=0.070309kg/cm<sup>2</sup>, 2. 1lb/ft=0.453592kg/m

Size	Outside Diameter (D)		Wall Thickness (t)		Weight (W <sub>ps</sub> )		Calculated Inside Diameter (d)		Hydrostatic test pressure (psi)				
	in.	mm	in.	mm	lb/ft	kg/m	in.	mm	Grade A25 (Std)	Grade A		Grade B	
										Std	Alt	Std	Alt
0.840	0.840	21.3	0.109	2.8	0.85	1.28	0.622	15.7	700	700	-	700	-
0.900	0.840	21.3	0.147	3.7	1.09	1.61	0.546	13.9	850	850	-	850	-
0.840	0.840	21.3	0.294	7.5	1.72	2.55	0.252	6.3	1000	1000	-	1000	-
1.050	1.050	26.7	0.113	2.9	1.13	1.70	0.824	20.9	700	700	-	700	-
1.050	1.050	26.7	0.154	3.9	1.48	2.19	0.742	18.9	820	820	-	850	-
1.050	1.050	26.7	0.308	7.8	2.44	3.64	0.434	11.1	1000	1000	-	1000	-
1.315	1.315	33.4	0.133	3.4	1.68	2.52	1.049	26.6	700	700	-	700	-
1.315	1.315	33.4	0.179	4.5	2.17	3.21	0.957	24.4	850	850	-	850	-
1.315	1.315	33.4	0.358	9.1	3.66	5.45	0.590	15.2	1000	1000	-	1000	-
1.660	1.660	42.2	0.140	3.6	2.27	3.43	1.300	33.0	1000	1200	-	1300	-
1.660	1.660	42.2	0.191	4.9	3.00	4.51	1.218	31.1	1300	1800	-	1900	-
1.660	1.660	42.2	0.382	9.7	5.22	7.77	0.896	22.8	1400	2200	-	2300	-
1.900	1.900	48.3	0.145	3.7	2.72	4.07	1.510	38.4	1000	1200	-	1300	-
1.900	1.900	48.3	0.200	5.1	3.63	5.43	1.500	38.1	1300	1800	-	1900	-
1.900	1.900	48.3	0.400	10.2	6.41	9.58	1.100	27.9	1400	2200	-	2300	-

Note 1. 1psi = 0.0031kg/cm<sup>2</sup> 2. 1lb/ft = 0.45359kg/m

# HUSTEEL API 5L

Size	Outside Diameter (D)		Wall Thickness (t)		Weight (Wpc)		Calculated Inside Diameter (d)		Hydrostatic test pressure (Psi)													
	in.	mm	in.	mm	lb/ft	kg/m	in.	mm	Std.	Grade	Grade	Grade	Grade	Grade	Grade	Grade	Grade	Grade	Grade	Grade		
										A25	A	B	x42	x46	x52	x56	x60	x65	x70	x74		
2 3/8	2.375	60.3	0.083	2.1	2.03	3.01	2.209	56.1	Std.	600	1260	1470	1760	1930	2180	2350	2500	2730	2940	3150	3410	3670
									Alt.	-	1570	1830	2200	2410	2730	2940	3150	3410	3670	-	-	-
2 3/8	2.375	60.3	0.109	2.8	2.64	3.97	2.157	54.7	Std.	800	1650	1930	2310	2530	2860	3000	3000	3000	3000	3000	3000	3000
									Alt.	-	2070	2410	2890	3170	3580	3860	4130	4470	4820	-	-	-
2 3/8	2.375	60.3	0.125	3.2	3.01	4.51	2.125	53.9	Std.	1000	1890	2210	2650	2910	3000	3000	3000	3000	3000	3000	3000	
									Alt.	-	2370	2500	3320	3630	4110	4420	4760	5130	5530	-	-	-
2 3/8	2.375	60.3	0.141	3.6	3.37	5.03	2.093	53.1	Std.	1000	2140	2490	2990	3000	3000	3000	3000	3000	3000	3000	3000	
									Alt.	-	2500	2500	3740	4100	4630	4990	5340	5780	6230	-	-	-
2 3/8	2.375	60.3	0.154	3.9	3.66	5.42	2.067	52.5	Std.	1000	2130	2500	3000	3000	3000	3000	3000	3000	3000	3000	3000	
									Alt.	-	2500	2500	4090	4470	5060	5450	5840	6320	6810	-	-	-
2 3/8	2.375	60.3	0.172	4.4	4.05	6.07	2.031	51.5	Std.	1100	2500	2500	3000	3000	3000	3000	3000	3000	3000	3000	3000	
									Alt.	-	2500	2500	4560	5000	5650	6080	6720	7360	-	-	-	-
2 3/8	2.375	60.3	0.188	4.8	4.40	6.57	1.999	50.7	Std.	1200	2500	2500	3000	3000	3000	3000	3000	3000	3000	3000	3000	
									Alt.	-	2500	2500	4990	5460	6170	6630	7120	760	810	-	-	-
2 3/8	2.375	60.3	0.218	5.5	5.03	7.43	1.938	49.3	Std.	1300	2500	2500	3000	3000	3000	3000	3000	3000	3000	3000		
									Alt.	-	2500	2500	5780	6330	7160	7860	8660	9460	-	-	-	-
2 3/8	2.375	60.3	0.250	6.4	5.68	8.51	1.875	47.5	Std.	1400	2500	2500	3000	3000	3000	3000	3000	3000	3000	3000		
									Alt.	-	2500	2500	6630	7260	8260	9260	10260	11260	-	-	-	-
2 3/8	2.375	60.3	0.281	7.1	6.29	9.31	1.813	46.1	Std.	1400	2500	2500	3000	3000	3000	3000	3000	3000	3000	3000		
									Alt.	-	2500	2500	7260	7960	9060	10060	11060	12060	-	-	-	-
2 3/8	2.375	60.3	0.436	11.1	9.04	13.47	1.503	38.1	Std.	1400	2500	2500	3000	3000	3000	3000	3000	3000	3000	3000		
									Alt.	-	2500	2500	7260	7960	9060	10060	11060	12060	-	-	-	-
2 7/8	2.875	73.0	0.083	2.1	2.48	3.67	2.709	68.8	Std.	600	1040	1210	1460	1590	1800	1940	2080	2250	2430	2610	2800	
									Alt.	-	1300	1520	1820	1990	2250	2430	2610	2800	3000	3200	3400	3600
2 7/8	2.875	73.0	0.109	2.8	3.22	4.85	2.657	67.4	Std.	800	1360	1590	1910	2090	2310	2550	2730	2950	3180	3420		
									Alt.	-	1710	1990	2390	2620	2960	3180	3420	3660	3900	4140	4380	4620
2 7/8	2.875	73.0	0.125	3.2	3.67	5.51	2.625	66.6	Std.	1000	1570	1830	2190	2400	2710	2920	3000	3000	3000			
									Alt.	-	1960	2280	2740	3000	3390	3650	3910	4240	4570	-	-	-
2 7/8	2.875	73.0	0.141	3.6	4.12	6.16	2.593	65.8	Std.	1000	1770	2060	2470	2710	3000	3000	3000	3000	3000			
									Alt.	-	2210	2500	3090	3380	3830	4120	4410	4780	5150	-	-	-
2 7/8	2.875	73.0	0.156	4.0	4.53	6.81	2.563	65.0	Std.	1000	1850	2280	2730	3000	3000	3000	3000	3000	3000			
									Alt.	-	2440	2500	3420	3740	4230	4560	4880	5290	5700	-	-	-
2 7/8	2.875	73.0	0.172	4.4	4.97	7.44	2.531	64.2	Std.	1000	2150	2500	3000	3000	3000	3000	3000	3000	3000			
									Alt.	-	2500	2500	3770	4130	4610	5030	5380	5830	6280	-	-	-
2 7/8	2.875	73.0	0.188	4.8	5.40	8.07	2.499	63.4	Std.	1000	2350	2500	3000	3000	3000	3000	3000	3000	3000			
									Alt.	-	2500	2500	4120	4510	5100	5490	5990	6380	6870	-	-	-
2 7/8	2.875	73.0	0.203	5.2	5.80	8.69	2.469	62.6	Std.	1000	2500	2500	3000	3000	3000	3000	3000	3000	3000			
									Alt.	-	2500	2500	4450	4870	5510	5920	6350	6880	7260	-	-	-
2 7/8	2.875	73.0	0.216	5.5	6.14	9.16	2.443	62.0	Std.	1100	2500	2500	3000	3000	3000	3000	3000	3000	3000			
									Alt.	-	2500	2500	4730	5180	5860	6310	6780	7260	-	-	-	-
2 7/8	2.875	73.0	0.250	6.4	7.02	10.51	2.375	60.2	Std.	1200	2500	2500	3000	3000	3000	3000	3000	3000	3000			
									Alt.	-	2500	2500	5480	6000	6780	7260	7860	8460	-	-	-	-
2 7/8	2.875	73.0	0.276	7.0	7.67	11.39	2.323	59.0	Std.	1300	2500	2500	3000	3000	3000	3000	3000	3000	3000			
									Alt.	-	2500	2500	6050	6620	7260	7860	8460	9060	-	-	-	-
2 7/8	2.875	73.0	0.562	14.0	13.71	20.37	1.771	45.0	Std.	1400	2500	2500	3000	3000	3000	3000	3000	3000	3000			
									Alt.	-	2500	2500	7260	7260	7260	7260	7260	7260	7260	7260	7260	7260
3 1/2	3.500	88.9	0.083	2.1	3.03	4.50	3.334	84.7	Std.	600	850	1000	1200	1310	1460	1590	1710	1850	1990			
									Alt.	-	1070	1250	1490	1640	1850	1990	2130	2310	2490	-	-	-
3 1/2	3.500	88.9	0.109	2.8	3.95	5.95	3.282	83.3	Std.	800	1120	1310	1570	1720	1940	2090	2240	2430	2620			
									Alt.	-	1400	1640	1960	2150	2430	2620	2900	3040	3270	-	-	-

Note 1. 1psi=0.000147kg/cm<sup>2</sup> 2. 1lb/ft=0.45359kg/m



Size	Outside Diameter (D)		Wall Thickness (t)		Weight (W <sub>pe</sub> )		Calculated Inside Diameter (d)		Hydrostatic test pressure (Psi)											
	in.	mm	in.	mm	lb/ft	kg/m	in.	mm	Std.	Grade	Grade	Grade	Grade	Grade	Grade	Grade	Grade	Grade	Grade	Grade
										A25	A	B	x42	x45	x52	x56	x60	x65	x70	x80
3 1/2	3.500	88.9	0.125	3.2	4.51	6.76	3.250	82.5	Std.	1000	1290	1500	1800	1910	2230	2400	2570	2790	3000	-
									Alt.	-	1610	1880	2250	2460	2790	3000	3210	3490	3750	-
3 1/2	3.500	88.9	0.141	3.6	5.06	7.57	3.218	81.7	Std.	1000	1490	1690	2030	2220	2510	2710	2900	3000	3000	-
									Alt.	-	1810	2120	2540	2780	3140	3380	3630	3830	4230	-
3 1/2	3.500	88.9	0.156	4.0	5.58	8.37	3.188	80.9	Std.	1000	1600	1870	2250	2460	2780	3000	3000	3000	3000	-
									Alt.	-	2010	2340	2810	3080	3480	3740	4010	4350	4680	-
3 1/2	3.500	88.9	0.172	4.4	6.12	9.17	3.156	80.1	Std.	1000	1770	2080	2480	2710	3000	3000	3000	3000	3000	-
									Alt.	-	2210	2500	3100	3390	3830	4130	4420	4790	5160	-
3 1/2	3.500	88.9	0.188	4.8	6.66	9.95	3.124	79.3	Std.	1000	1930	2260	2710	2970	3000	3000	3000	3000	3000	-
									Alt.	-	2420	2900	3380	3710	4190	4510	4830	5240	5640	-
3 1/2	3.500	88.9	0.216	5.5	7.58	11.31	3.068	77.9	Std.	1000	2220	2500	3000	3000	3000	3000	3000	3000	3000	-
									Alt.	-	2900	2900	3800	4260	4810	5180	5550	6020	6480	-
3 1/2	3.500	88.9	0.250	6.4	8.69	13.02	3.000	76.1	Std.	-	2900	2900	3000	3000	3000	3000	3000	3000	3000	-
									Alt.	-	2900	2900	4500	4930	5570	6000	6430	6860	7280	-
3 1/2	3.500	88.9	0.281	7.1	9.67	14.32	2.938	74.7	Std.	-	2900	2900	3000	3000	3000	3000	3000	3000	3000	-
									Alt.	-	2900	2900	5060	5540	6260	6740	7230	7660	7850	-
3 1/2	3.500	88.9	0.308	7.6	10.26	15.24	2.900	73.7	Std.	1300	2900	2900	3000	3000	3000	3000	3000	3000	3000	-
									Alt.	-	2900	2900	5400	5910	6680	7200	7690	7860	7860	-
3 1/2	3.500	88.9	0.600	15.2	18.00	27.63	2.300	58.5	Std.	-	2900	2900	3000	3000	3000	3000	3000	3000	3000	-
									Alt.	-	2900	2900	7260	7860	7860	7860	7860	7860	7860	7860
4	4.000	101.6	0.083	2.1	3.48	5.15	3.834	97.4	Std.	-	750	870	1050	1150	1290	1390	1490	1620	1740	-
									Alt.	-	930	1090	1310	1430	1620	1740	1870	2020	2180	-
4	4.000	101.6	0.100	2.8	4.53	6.82	3.782	96.0	Std.	600	980	1140	1370	1500	1700	1830	1960	2130	2290	-
									Alt.	-	1230	1430	1720	1880	2130	2290	2450	2660	2850	-
4	4.000	101.6	0.125	3.2	5.18	7.76	3.750	95.2	Std.	-	1130	1310	1580	1730	1950	2100	2250	2440	2630	-
									Alt.	-	1410	1640	1970	2160	2440	2630	2810	3050	3280	-
4	4.000	101.6	0.141	3.6	5.82	8.70	3.718	94.4	Std.	800	1270	1480	1780	1950	2200	2370	2540	2750	2950	-
									Alt.	-	1590	1850	2220	2430	2750	2960	3170	3440	3700	-
4	4.000	101.6	0.156	4.0	6.41	9.63	3.688	93.6	Std.	-	1400	1640	1970	2130	2430	2620	2810	3000	3000	-
									Alt.	-	1760	2050	2460	2690	3040	3280	3510	3800	4100	-
4	4.000	101.6	0.172	4.4	7.04	10.55	3.656	92.8	Std.	1000	1550	1810	2170	2370	2680	2890	3000	3000	3000	-
									Alt.	-	1940	2260	2710	2970	3350	3610	3830	4190	4520	-
4	4.000	101.6	0.188	4.8	7.66	11.46	3.624	92.0	Std.	1300	1690	1910	2370	2590	2900	3000	3000	3000	3000	-
									Alt.	-	2120	2470	2960	3240	3670	3950	4230	4580	4940	-
4	4.000	101.6	0.226	5.7	9.12	13.48	2.548	90.2	Std.	1200	2030	2370	2890	3000	3000	3000	3000	3000	3000	-
									Alt.	-	2540	2800	3560	3900	4410	4790	5090	5510	5930	-
4	4.000	101.6	0.250	6.4	10.02	15.02	2.500	88.8	Std.	-	2250	2630	3000	3000	3000	3000	3000	3000	3000	-
									Alt.	-	2800	2800	3940	4310	4880	5250	5630	6090	6560	-
4	4.000	101.6	0.281	7.1	11.17	16.55	2.438	87.4	Std.	-	2530	2800	3000	3000	3000	3000	3000	3000	3000	-
									Alt.	-	2800	2800	4430	4850	5480	5900	6320	6850	7260	-
4	4.000	101.6	0.318	8.1	12.52	18.68	2.364	85.4	Std.	1700	2800	2800	3000	3000	3000	3000	3000	3000	3000	-
									Alt.	-	2900	2800	5010	5450	6200	6680	7160	7660	7860	-
4 1/2	4.500	114.3	0.083	2.1	3.92	5.81	4.334	110.1	Std.	-	660	770	930	1020	1150	1240	1330	1440	1550	1770
									Alt.	-	830	990	1160	1270	1440	1550	1660	1800	1940	2210
4 1/2	4.500	114.3	0.125	3.2	5.85	8.77	4.250	107.9	Std.	800	1000	1170	1400	1530	1730	1870	2000	2170	2330	2670
									Alt.	-	1250	1460	1750	1920	2170	2330	2500	2710	2920	3330
4 1/2	4.500	114.3	0.141	3.6	6.57	9.83	4.218	107.1	Std.	-	1130	1320	1580	1730	1900	2110	2260	2440	2630	3000
									Alt.	-	1410	1650	1970	2160	2440	2630	2820	3060	3290	3760
4 1/2	4.500	114.3	0.156	4.0	7.24	10.88	4.188	105.3	Std.	1000	1250	1460	1750	1910	2160	2330	2500	2700	2910	3000
									Alt.	-	1560	1820	2180	2380	2700	2910	3120	3380	3640	4160

 Note 1. 1psi = 0.07031kg/cm<sup>2</sup> 2. 1lb/ft = 0.45359kg/m

# HUSTEEL API 5L

Size	Outside Diameter (D)		Wall Thickness (t)		Weight (Wpe)		Calculated Inside Diameter (d)		Hydrostatic test pressure (psi)													
	in.	mm	in.	mm	lb/ft	kg/m	in.	mm	Std.	Alt.	Grade	Grade	Grade	Grade	Grade	Grade	Grade	Grade	Grade	Grade	Grade	
											A25	A	B	× 42	× 46	× 52	× 56	× 60	× 65	× 70	× 80	
4 1/2	4.500	114.3	0.172	4.4	7.96	11.92	4.158	105.5	Std.	-	1380	1610	1900	2110	2390	2570	2750	2980	3000	3000	3000	3000
									Alt.	-	1720	2010	2410	2640	2980	3210	3690	3730	4010	4580		
4 1/2	4.500	114.3	0.188	4.8	8.67	12.96	4.124	104.7	Std.	1200	1500	1750	2110	2310	2510	2810	3000	3000	3000	3000	3000	3000
									Alt.	-	1680	2190	2630	2980	3260	3510	3760	4070	4390	5010		
4 1/2	4.500	114.3	0.203	5.2	9.32	13.99	4.094	103.9	Std.	-	1620	1820	2270	2490	2810	3000	3000	3000	3000	3000	3000	3000
									Alt.	-	2030	2370	2840	3110	3520	3790	4060	4400	4740	5410		
4 1/2	4.500	114.3	0.219	5.6	10.02	15.01	4.062	103.1	Std.	1200	1750	2040	2450	2680	3000	3000	3000	3000	3000	3000	3000	
									Alt.	-	2190	2560	3070	3360	3800	4090	4380	4790	5110	5840		
4 1/2	4.500	114.3	0.237	6.0	10.80	16.02	4.026	102.3	Std.	1200	1900	2210	2650	2910	3000	3000	3000	3000	3000	3000	3000	
									Alt.	-	2370	2770	3320	3630	4110	4420	4740	5140	5530	6320		
4 1/2	4.500	114.3	0.250	6.4	11.36	17.03	4.000	101.5	Std.	-	2000	2330	2800	3000	3000	3000	3000	3000	3000	3000	3000	
									Alt.	-	2500	2800	3500	3830	4330	4670	5000	5420	5830	6670		
4 1/2	4.500	114.3	0.281	7.1	12.67	18.77	3.936	100.1	Std.	-	2250	2620	3000	3000	3000	3000	3000	3000	3000	3000	3000	
									Alt.	-	2800	2800	3500	4310	4870	5250	5620	6090	6560	7260		
4 1/2	4.500	114.3	0.312	7.9	13.97	20.73	3.876	98.5	Std.	-	2500	2800	3000	3000	3000	3000	3000	3000	3000	3000	3000	
									Alt.	-	2800	2800	4200	4790	5410	5820	6240	6760	7260	7260		
4 1/2	4.500	114.3	0.337	8.6	15.00	22.42	3.826	97.1	Std.	1200	2700	2800	3000	3000	3000	3000	3000	3000	3000	3000	3000	
									Alt.	-	2800	2800	4720	5170	5840	6290	6740	7260	7260	7260		
4 1/2	4.500	114.3	0.438	11.1	19.02	28.25	3.624	92.1	Std.	-	2800	2800	3000	3000	3000	3000	3000	3000	3000	3000	3000	
									Alt.	-	2800	2800	6130	6720	7260	7260	7260	7260	7260	7260		
4 1/2	4.500	114.3	0.531	13.5	22.53	33.56	3.438	87.3	Std.	-	2800	2800	3000	3000	3000	3000	3000	3000	3000	3000	3000	
									Alt.	-	2800	2800	7260	7260	7260	7260	7260	7260	7260	7260		
4 1/2	4.500	114.3	0.674	17.1	27.57	40.99	3.152	80.1	Std.	-	2800	2800	3000	3000	3000	3000	3000	3000	3000	3000	3000	
									Alt.	-	2800	2800	7260	7260	7260	7260	7260	7260	7260	7260		
5 9/16	5.563	141.3	0.083	2.1	4.85	7.21	5.397	137.1	Std.	-	540	630	790	820	930	1000	1070	1160	1250	1430	1430	
									Alt.	-	670	780	940	1030	1160	1250	1340	1450	1570	1790		
5 9/16	5.563	141.3	0.125	3.2	7.27	10.90	5.313	134.9	Std.	670	810	940	1130	1240	1400	1510	1620	1750	1890	2160	2160	
									Alt.	-	1010	1180	1420	1550	1750	1890	2020	2190	2360	2700		
5 9/16	5.563	141.3	0.156	4.0	9.02	13.54	5.251	133.3	Std.	840	1010	1180	1410	1550	1750	1860	2020	2190	2360	2690	2690	
									Alt.	-	1260	1470	1770	1930	2190	2360	2520	2730	2940	3370		
5 9/16	5.563	141.3	0.188	4.8	10.80	16.16	5.187	131.7	Std.	1010	1220	1420	1700	1870	2110	2270	2430	2640	2840	3000		
									Alt.	-	1520	1770	2130	2330	2640	2840	3040	3290	3560	4060		
5 9/16	5.563	141.3	0.219	5.6	12.51	18.74	5.125	130.1	Std.	1180	1420	1650	1980	2170	2460	2650	2830	3000	3000	3000		
									Alt.	-	1770	2070	2490	2720	3070	3310	3540	3840	4130	4730		
5 9/16	5.563	141.3	0.258	6.6	14.63	21.92	5.047	128.1	Std.	1200	1670	1950	2340	2560	2890	3000	3000	3000	3000	3000		
									Alt.	-	2090	2430	2920	3000	3520	3900	4170	4520	4830	5570		
5 9/16	5.563	141.3	0.281	7.1	15.87	23.50	5.001	127.1	Std.	1520	1820	2120	2550	2790	3000	3000	3000	3000	3000	3000		
									Alt.	-	2270	2650	3160	3490	3940	4240	4550	4920	5300	6060		
5 9/16	5.563	141.3	0.312	7.9	17.51	25.99	4.939	125.5	Std.	1680	2020	2360	2830	3000	3000	3000	3000	3000	3000	3000		
									Alt.	-	2520	2800	3530	3870	4370	4710	5050	5470	5890	6730		
5 9/16	5.563	141.3	0.344	8.7	19.19	28.45	4.875	123.9	Std.	1860	2230	2600	3000	3000	3000	3000	3000	3000	3000	3000		
									Alt.	-	2790	2800	3900	4270	4820	5190	5570	6030	6490	7260		
5 9/16	5.563	141.3	0.375	9.5	20.80	30.88	4.813	122.3	Std.	2020	2430	2800	3000	3000	3000	3000	3000	3000	3000	3000		
									Alt.	-	2800	2800	4250	4690	5260	5660	6070	6570	7080	7260		
5 9/16	5.563	141.3	0.500	12.7	27.05	40.28	4.563	115.9	Std.	2700	2600	2800	3000	3000	3000	3000	3000	3000	3000	3000		
									Alt.	-	2800	2800	5660	6200	7010	7260	7260	7260	7260	7260		
5 9/16	5.563	141.3	0.625	15.9	32.99	49.17	4.313	109.5	Std.	2900	2900	2900	3000	3000	3000	3000	3000	3000	3000	3000		
									Alt.	-	2800	2800	7080	7260	7260	7260	7260	7260	7260	7260		
5 9/16	5.563	141.3	0.750	17.1	38.59	57.56	4.063	103.1	Std.	2800	2900	2900	3000	3000	3000	3000	3000	3000	3000	3000		
									Alt.	-	2800	2800	7260	7260	7260	7260	7260	7260	7260	7260		

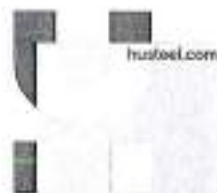
Note 1. 1psi=0.0703kg/cm<sup>2</sup> 2. 1lb/ft=0.45359kg/m

Size	Outside Diameter (D)		Wall Thickness (t)		Weight (Wipe)		Calculated Inside Diameter (d)		Hydrostatic test pressure (Psi)										
	in.	mm	in.	mm	lb/ft	kg/m	in.	mm	Std.	Grade	Grade	Grade	Grade	Grade	Grade	Grade	Grade	Grade	Grade
										A	B	X42	X46	X52	X56	X60	X65	X70	X80
6 5/8	6.625	168.3	0.083	2.1	5.80	8.61	6.459	164.1	Std.	450	530	790	860	980	1050	1130	1220	1320	1500
									Alt.	560	660	790	860	900	1050	1130	1220	1320	1500
6 5/8	6.625		0.109	2.8	7.59	11.43	6.407	162.7	Std.	500	690	1040	1140	1280	1360	1480	1600	1730	1970
									Alt.	740	890	1040	1140	1200	1380	1480	1600	1730	1970
6 5/8	6.625		0.125	3.2	8.69	13.03	6.375	161.9	Std.	680	790	1190	1300	1470	1580	1700	1840	1980	2260
									Alt.	850	990	1190	1300	1470	1580	1700	1840	1980	2260
6 5/8	6.625		0.141	3.6	9.77	14.62	6.343	161.1	Std.	770	890	1340	1470	1660	1790	1920	2080	2230	2550
									Alt.	960	1120	1340	1470	1660	1790	1920	2080	2230	2550
6 5/8	6.625		0.156	4.0	10.79	16.21	6.313	160.3	Std.	850	990	1490	1620	1840	1980	2120	2300	2470	2830
									Alt.	1060	1240	1480	1620	1840	1980	2120	2300	2470	2830
6 5/8	6.625		0.172	4.4	11.87	17.78	6.281	159.5	Std.	930	1090	1640	1790	2030	2180	2340	2530	2730	3000
									Alt.	1170	1360	1640	1790	2030	2180	2340	2530	2730	3120
6 5/8	6.625		0.188	4.8	12.94	19.36	6.249	158.7	Std.	1020	1190	1790	1960	2210	2380	2550	2770	2980	3000
									Alt.	1280	1490	1790	1960	2210	2380	2550	2770	2980	3410
6 5/8	6.625		0.203	5.2	13.94	20.91	6.219	157.9	Std.	1100	1290	1930	2110	2390	2570	2760	2990	3000	3000
									Alt.	1380	1610	1930	2110	2390	2570	2760	2990	3220	3680
6 5/8	6.625		0.219	5.6	15.00	22.47	6.187	157.1	Std.	1190	1390	2080	2280	2580	2780	2980	3000	3000	3000
									Alt.	1420	1740	2080	2280	2580	2780	2980	3220	3470	3970
6 5/8	6.625		0.250	6.4	17.04	25.55	6.125	155.5	Std.	1300	1580	2380	2600	2940	3000	3000	3000	3000	3000
									Alt.	1700	1980	2380	2600	2940	3170	3420	3680	3960	4530
6 5/8	6.625		0.280	7.1	18.99	28.22	6.065	154.1	Std.	1520	1780	2660	2920	3000	3000	3000	3000	3000	3000
									Alt.	1900	2220	2660	2920	3300	3590	3860	4120	4440	5070
6 5/8	6.625		0.312	7.9	21.06	31.25	6.001	152.5	Std.	1700	1980	2970	3000	3000	3000	3000	3000	3000	3000
									Alt.	2120	2470	2970	3290	3570	3960	4240	4590	4940	5650
6 5/8	6.625		0.344	8.7	23.10	34.24	5.937	150.9	Std.	1810	2180	3000	3000	3000	3000	3000	3000	3000	3000
									Alt.	2340	2730	3270	3580	4050	4360	4670	5060	5490	6230
6 5/8	6.625		0.375	9.5	25.05	37.20	5.875	149.3	Std.	2040	2380	3000	3000	3000	3000	3000	3000	3000	3000
									Alt.	2550	2900	3570	3910	4420	4780	5090	5520	5940	6790
6 5/8	6.625		0.432	11.0	28.60	42.67	5.761	146.3	Std.	2350	2740	3000	3000	3000	3000	3000	3000	3000	3000
									Alt.	2800	2800	4110	4500	5090	5480	5870	6360	6850	7860
6 5/8	6.625		0.500	12.7	32.74	48.73	5.625	142.9	Std.	2720	2800	3000	3000	3000	3000	3000	3000	3000	3000
									Alt.	2900	2800	4750	5210	5690	6340	6790	7260	7860	7860

Note 1. 1psi = 0.07031kg/cm<sup>2</sup> 2. lb/ft = 0.45359kg/l

# HUSTEEL API 5L

Size	Outside Diameter (D)		Wall Thickness (t)		Weight (Wipe)		Calculated Inside Diameter (d)		Hydrostatic test pressure (psi)													
	in.	mm	in.	mm	lb/ft	kg/m	in.	mm		Grade	Grade	Grade	Grade	Grade	Grade	Grade	Grade	Grade	Grade	Grade		
										A	B	×42	×46	×52	×56	×60	×65	×70	×80			
6 5/8	8.625	168.3	0.562	14.3	36.43	54.31	5.501	139.7	Std.	2600	2600	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	
									Alt.	2600	2600	5340	5850	6620	7130	7650	7260	7260	7260	7260	7260	
6 5/8	6.625		0.625	15.9	40.09	59.76	5.375	136.5	Std.	2600	2600	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	
									Alt.	2600	2600	5940	6510	7260	7260	7260	7260	7260	7260	7260	7260	7260
6 5/8	6.625		0.719	18.3	45.39	67.69	5.187	131.7	Std.	2600	2600	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	
									Alt.	2600	2600	6840	7260	7260	7260	7260	7260	7260	7260	7260	7260	7260
6 5/8	6.625		0.790	19.1	47.10	70.27	5.125	130.1	Std.	2600	2600	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	
									Alt.	2600	2600	7130	7260	7260	7260	7260	7260	7260	7260	7260	7260	7260
6 5/8	6.625		0.864	21.9	53.21	79.05	4.897	124.5	Std.	2600	2600	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	
									Alt.	2600	2600	7260	7260	7260	7260	7260	7260	7260	7260	7260	7260	7260
6 5/8	6.625		0.875	22.2	53.78	79.98	4.875	123.9	Std.	2600	2600	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	
									Alt.	2600	2600	7260	7260	7260	7260	7260	7260	7260	7260	7260	7260	7260
8 5/8	8.625	219.1	0.125	3.2	11.36	17.04	8.375	212.7	Std.	520	610	910	1000	1130	1220	1300	1410	1520	1520	1520	1740	
									Alt.	650	760	910	1000	1130	1220	1300	1410	1520	1520	1520	1740	
8 5/8	8.625		0.156	4.0	14.12	21.22	8.313	211.1	Std.	650	760	1140	1250	1410	1520	1630	1760	1900	1900	2170	2170	
									Alt.	810	950	1140	1250	1410	1520	1630	1760	1900	1900	2170	2170	
8 5/8	8.625		0.188	4.8	16.95	25.37	8.249	209.5	Std.	780	920	1370	1500	1700	1830	1960	2130	2290	2290	2620	2620	
									Alt.	960	1140	1370	1500	1700	1830	1960	2130	2290	2290	2620	2620	
8 5/8	8.625		0.203	5.2	18.28	27.43	8.219	208.7	Std.	850	990	1480	1620	1840	1980	2120	2290	2470	2470	2820	2820	
									Alt.	1050	1240	1480	1620	1840	1980	2120	2290	2470	2470	2820	2820	
8 5/8	8.625		0.219	5.6	19.68	29.48	8.187	207.9	Std.	910	1070	1600	1750	1980	2130	2290	2480	2670	2670	3050	3050	
									Alt.	1140	1330	1600	1750	1980	2130	2290	2480	2670	2670	3050	3050	
8 5/8	8.625		0.250	6.4	22.38	33.57	8.125	206.3	Std.	1040	1220	1830	2000	2260	2430	2610	2830	3000	3000	3480	3480	
									Alt.	1300	1520	1830	2000	2260	2430	2610	2830	3040	3040	3480	3480	
8 5/8	8.625		0.277	7.0	24.72	36.61	8.071	205.1	Std.	1160	1360	2020	2220	2510	2700	2890	3000	3000	3000	3000	3000	
									Alt.	1450	1680	2020	2220	2510	2700	2890	3130	3370	3370	3850	3850	
8 5/8	8.625		0.312	7.9	27.73	41.14	8.091	203.3	Std.	1300	1520	2280	2500	2820	3000	3000	3000	3000	3000	3000	3000	
									Alt.	1630	1900	2280	2500	2820	3040	3260	3530	3800	3800	4340	4340	
8 5/8	8.625		0.322	8.2	28.58	42.65	7.991	202.7	Std.	1340	1570	2350	2580	2910	3000	3000	3000	3000	3000	3000	3000	
									Alt.	1680	1960	2350	2580	2910	3140	3360	3640	3920	3920	4480	4480	
8 5/8	8.625		0.344	8.7	30.45	45.14	7.937	201.7	Std.	1440	1680	2510	2750	3000	3000	3000	3000	3000	3000	3000	3000	
									Alt.	1790	2080	2510	2750	3110	3350	3590	3890	4190	4190	4790	4790	
8 5/8	8.625		0.375	9.5	33.07	49.10	7.875	200.1	Std.	1570	1830	2740	3000	3000	3000	3000	3000	3000	3000	3000	3000	
									Alt.	1960	2280	2740	3000	3390	3650	3910	4240	4510	4510	5200	5200	
8 5/8	8.625		0.438	11.1	38.33	56.94	7.749	195.9	Std.	1830	2130	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	
									Alt.	2290	2670	3200	3500	3960	4270	4570	4950	5330	5330	6090	6090	
8 5/8	8.625		0.500	12.7	43.43	64.64	7.625	193.7	Std.	2090	2430	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	
									Alt.	2610	2980	3650	4000	4520	4970	5220	5650	6090	6090	6960	6960	
8 5/8	8.625		0.562	14.3	48.44	72.22	7.501	190.5	Std.	2350	2740	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	
									Alt.	2800	2800	4110	4500	5080	5470	5860	6350	6840	6840	7860	7860	
8 5/8	8.625		0.625	15.9	53.45	79.67	7.375	187.3	Std.	2610	2800	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	
									Alt.	2800	2800	4570	5000	5690	6090	6520	7070	7260	7260	7260	7260	
8 5/8	8.625		0.719	18.3	60.77	90.62	7.187	182.5	Std.	2800	2800	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	
									Alt.	2800	2800	5290	5790	6600	7000	7260	7260	7260	7260	7260	7260	7260
8 5/8	8.625		0.790	19.1	63.14	94.2	7.125	180.9	Std.	2800	2800	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	
									Alt.	2900	2900	5480	6000	6780	7260	7260	7260	7260	7260	7260	7260	7260
8 5/8	8.625		0.812	20.6	67.82	100.84	7.001	177.9	Std.	2900	2900	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	
									Alt.	2900	2900	5930	6500	7260	7260	7260	7260	7260	7260	7260	7260	7260
8 5/8	8.625		0.875	22.2	72.49	107.79	6.875	174.7	Std.	2900	2900	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	
									Alt.	2900	2900	6390	7000	7260	7260	7260	7260	7260	7260	7260	7260	7260



API 5L

HUSTEEL

Size	Outside Diameter (D)		Wall Thickness (t)		Weight (Wipe)		Calculated Inside Diameter (d)		Hydrostatic test pressure (psi)											
	in.	mm	in.	mm	lb/ft	kg/m	in.	mm	Std.	Grade	Grade	Grade	Grade	Grade	Grade	Grade	Grade	Grade	Grade	
										A	B	x42	x46	x52	x56	x60	x65	x70	x80	
8 5/8	9.625	219.1	1.000	25.4	61.51	121.33	6.625	168.3	Std.	2800	2800	3000	3000	3000	3000	3000	3000	3000	3000	3000
									Alt.	2800	2800	1260	1260	1260	1260	1260	1260	1260	1260	1260
10 3/4	10.750	273.1	0.156	4.0	17.67	25.54	10.438	265.1	Std.	520	610	1040	1130	1280	1380	1480	1600	1730	1870	1970
									Alt.	650	760	1040	1130	1280	1380	1480	1600	1730	1870	1970
10 3/4	10.750		0.188	4.8	21.23	31.76	10.374	263.5	Std.	630	730	1250	1370	1560	1650	1780	1930	2080	2380	
									Alt.	790	920	1250	1370	1520	1660	1780	1930	2080	2380	
10 3/4	10.750		0.203	5.2	22.89	34.35	10.344	262.7	Std.	680	790	1300	1480	1670	1800	1930	2090	2250	2570	
									Alt.	850	990	1300	1480	1670	1800	1930	2090	2250	2570	
10 3/4	10.750		0.219	5.6	24.65	36.94	10.312	261.9	Std.	730	860	1450	1580	1800	1940	2080	2250	2420	2770	
									Alt.	920	1070	1450	1580	1800	1940	2080	2250	2420	2770	
10 3/4	10.750		0.250	6.4	28.06	42.09	10.250	260.3	Std.	840	980	1660	1820	2060	2210	2370	2570	2770	3000	
									Alt.	1050	1220	1660	1820	2060	2210	2370	2570	2770	3160	
10 3/4	10.750		0.279	7.1	31.23	48.57	10.192	258.9	Std.	930	1090	1850	2030	2290	2470	2650	2870	3000	3000	
									Alt.	1170	1360	1850	2030	2290	2470	2650	2870	3000	3530	
10 3/4	10.750		0.307	7.8	34.27	51.03	10.136	257.5	Std.	1030	1200	2040	2230	2520	2720	2910	3000	3000	3000	
									Alt.	1290	1500	2040	2230	2520	2720	2910	3160	3400	3680	
10 3/4	10.750		0.394	8.7	38.27	56.72	10.062	255.7	Std.	1150	1340	2280	2500	2830	3000	3000	3000	3000	3000	
									Alt.	1440	1680	2280	2500	2830	3050	3260	3540	3810	4350	
10 3/4	10.750		0.365	9.3	40.92	60.50	10.020	254.5	Std.	1220	1420	2420	2660	3000	3000	3000	3000	3000	3000	
									Alt.	1530	1780	2420	2660	3000	3230	3460	3750	4040	4620	
10 3/4	10.750		0.438	11.1	48.28	71.72	9.874	250.9	Std.	1470	1710	2910	3000	3000	3000	3000	3000	3000	3000	
									Alt.	1830	2140	2910	3190	3600	3680	4160	4500	4850	5540	
10 3/4	10.750		0.500	12.7	54.79	81.55	9.750	247.7	Std.	1670	1950	3000	3000	3000	3000	3000	3000	3000	3000	
									Alt.	2090	2440	3320	3640	4110	4420	4740	5140	5530	6330	
10 3/4	10.750		0.562	14.3	61.21	91.26	9.626	244.5	Std.	1880	2200	3000	3000	3000	3000	3000	3000	3000	3000	
									Alt.	2350	2740	3730	4090	4620	4960	5330	5780	6220	7110	
10 3/4	10.750		0.625	15.9	67.65	100.85	9.500	241.3	Std.	2090	2440	3000	3000	3000	3000	3000	3000	3000	3000	
									Alt.	2620	2800	4150	4520	5140	5530	5930	6420	6920	7260	
10 3/4	10.750		0.719	18.3	77.10	114.99	9.312	236.5	Std.	2410	2800	3000	3000	3000	3000	3000	3000	3000	3000	
									Alt.	2800	2800	4780	5230	5910	6310	6820	7260	7260	7260	
10 3/4	10.750		0.812	20.6	86.26	128.27	9.126	231.9	Std.	2720	2800	3000	3000	3000	3000	3000	3000	3000	3000	
									Alt.	2800	2800	5390	5910	6680	7150	7260	7260	7260	7260	
10 3/4	10.750		0.875	22.2	92.37	137.36	9.000	228.7	Std.	2800	2800	3000	3000	3000	3000	3000	3000	3000	3000	
									Alt.	2800	2800	5810	6370	7200	7260	7260	7260	7260	7260	
10 3/4	10.750		0.938	23.8	98.39	146.32	8.874	225.5	Std.	2800	2800	3000	3000	3000	3000	3000	3000	3000	3000	
									Alt.	2800	2800	6230	6620	7260	7260	7260	7260	7260	7260	
10 3/4	10.750		1.000	25.4	104.23	155.15	8.750	222.3	Std.	2800	2800	3000	3000	3000	3000	3000	3000	3000	3000	
									Alt.	2800	2800	6640	7260	7260	7260	7260	7260	7260	7260	
10 3/4	10.750		1.250	31.8	126.94	189.22	8.250	209.5	Std.	2800	2800	3000	3000	3000	3000	3000	3000	3000	3000	
									Alt.	2800	2800	7260	7260	7260	7260	7260	7260	7260	7260	
12 3/4	12.750	323.9	0.172	4.4	23.13	34.67	12.426	315.1	Std.	400	570	960	1050	1190	1280	1380	1480	1610	1830	
									Alt.	610	710	960	1050	1190	1280	1380	1480	1610	1830	
12 3/4	12.750		0.188	4.8	25.25	37.77	12.374	314.3	Std.	530	620	1050	1150	1300	1400	1500	1630	1750	2010	
									Alt.	660	770	1050	1150	1300	1400	1500	1630	1750	2010	
12 3/4	12.750		0.203	5.2	27.23	40.87	12.344	313.5	Std.	570	670	1140	1250	1410	1520	1620	1750	1890	2170	
									Alt.	720	840	1140	1250	1410	1520	1620	1750	1900	2040	2340
12 3/4	12.750		0.219	5.6	29.34	43.96	12.312	312.7	Std.	620	720	1230	1340	1520	1640	1750	1900	2040	2340	
									Alt.	770	900	1230	1340	1520	1640	1750	1900	2040	2340	
12 3/4	12.750		0.250	6.4	33.41	50.11	12.250	311.1	Std.	710	820	1400	1530	1730	1870	2000	2170	2330	2630	
									Alt.	880	1030	1400	1530	1730	1870	2000	2170	2330	2630	

Note 1. 1gal = 0.07031kg/cft 2. 1lb/ft = 0.45359kg/ft

# HUSTEEL API 5L

Size	Outside Diameter (D)		Wall Thickness (t)		Weight (W <sub>sp</sub> )		Calculated Inside Diameter (d)		Hydrostatic test pressure (psi)										
	in.	mm	in.	mm	lb/ft	kg/m	in.	mm		Grade	Grade	Grade	Grade	Grade	Grade	Grade	Grade	Grade	Grade
										A	B	×42	×45	×52	×56	×60	×65	×70	×80
12 3/4	12.750	323.9	0.281	7.1	37.46	55.47	12.189	309.7	Std.	790	930	1570	1720	1950	2100	2250	2440	2620	3000
									Alt.	990	1180	1570	1720	1950	2100	2250	2440	2620	3000
12 3/4	12.750		0.312	7.9	41.48	61.56	12.126	308.1	Std.	680	1030	1750	1940	2160	2330	2500	2700	2940	3000
									Alt.	1100	1280	1750	1940	2160	2330	2500	2700	2940	3000
12 3/4	12.750		0.330	8.4	43.81	65.25	12.090	307.1	Std.	930	1080	1850	2020	2290	2460	2640	2860	3000	3000
									Alt.	1160	1360	1850	2020	2290	2460	2640	2860	3060	3520
12 3/4	12.750		0.344	8.7	45.62	67.62	12.062	306.5	Std.	970	1130	1930	2110	2390	2570	2750	2980	3000	3000
									Alt.	1210	1420	1930	2110	2390	2570	2750	2980	3210	3570
12 3/4	12.750		0.375	9.5	49.61	73.65	12.000	304.9	Std.	1050	1240	2100	2300	2600	2800	3000	3000	3000	3000
									Alt.	1320	1540	2100	2300	2600	2800	3000	3250	3500	4000
12 3/4	12.750		0.406	10.3	53.57	79.65	11.938	303.3	Std.	1150	1340	2270	2490	2810	3000	3000	3000	3000	3000
									Alt.	1430	1670	2270	2490	2810	3030	3250	3520	3790	4300
12 3/4	12.750		0.438	11.1	57.65	85.62	11.874	301.7	Std.	1240	1440	2450	2690	3000	3000	3000	3000	3000	3000
									Alt.	1550	1800	2450	2690	3040	3270	3500	3800	4090	4670
12 3/4	12.750		0.500	12.7	65.48	97.46	11.750	298.5	Std.	1410	1650	2800	3000	3000	3000	3000	3000	3000	3000
									Alt.	1760	2050	2800	3030	3470	3730	4000	4300	4670	5330
12 3/4	12.750		0.562	14.3	73.22	109.18	11.626	295.3	Std.	1580	1850	3000	3000	3000	3000	3000	3000	3000	3000
									Alt.	1980	2310	3150	3450	3800	4200	4500	4870	5250	5990
12 3/4	12.750		0.625	15.9	81.01	120.76	11.500	292.1	Std.	1750	2050	3000	3000	3000	3000	3000	3000	3000	3000
									Alt.	2210	2570	3500	3830	4300	4670	5000	5420	5830	6670
12 3/4	12.750		0.688	17.5	88.71	132.23	11.374	288.9	Std.	1940	2270	3000	3000	3000	3000	3000	3000	3000	3000
									Alt.	2430	2800	3850	4220	4770	5140	5500	5980	6420	7260
12 3/4	12.750		0.750	19.1	96.21	143.56	11.250	285.7	Std.	2120	2470	3000	3000	3000	3000	3000	3000	3000	3000
									Alt.	2650	2900	4200	4600	5200	5600	6000	6500	7000	7260
12 3/4	12.750		0.812	20.6	103.63	154.08	11.126	282.7	Std.	2290	2670	3000	3000	3000	3000	3000	3000	3000	3000
									Alt.	2800	2900	4500	4980	5630	6050	6500	7040	7260	7260
12 3/4	12.750		0.875	22.2	111.08	165.17	11.000	279.5	Std.	2470	2800	3000	3000	3000	3000	3000	3000	3000	3000
									Alt.	2800	2800	4900	5370	6070	6530	7000	7260	7260	7260
12 3/4	12.750		0.938	23.8	118.44	176.13	10.874	276.3	Std.	2650	2800	3000	3000	3000	3000	3000	3000	3000	3000
									Alt.	2800	2800	5200	5750	6500	7000	7260	7260	7260	7260
12 3/4	12.750		1.000	25.4	125.61	186.97	10.750	273.1	Std.	2800	2800	3000	3000	3000	3000	3000	3000	3000	3000
									Alt.	2800	2800	5600	6130	6930	7260	7260	7260	7260	7260
12 3/4	12.750		1.062	27.0	132.69	197.69	10.626	269.9	Std.	2800	2800	3000	3000	3000	3000	3000	3000	3000	3000
									Alt.	2800	2800	5950	6510	7260	7260	7260	7260	7260	7260
12 3/4	12.750		1.125	28.6	139.81	208.27	10.500	266.7	Std.	2800	2800	3000	3000	3000	3000	3000	3000	3000	3000
									Alt.	2800	2800	6300	6900	7260	7260	7260	7260	7260	7260
12 3/4	12.750		1.250	31.8	153.67	229.06	10.250	260.3	Std.	2800	2800	3000	3000	3000	3000	3000	3000	3000	3000
									Alt.	2800	2800	7000	7260	7260	7260	7260	7260	7260	7260
14	14.000	355.6	0.188	4.8	27.76	41.52	13.624	346.0	Std.	480	560	960	1050	1190	1280	1370	1480	1600	1830
									Alt.	600	710	960	1050	1190	1280	1370	1480	1600	1730
14	14.000		0.203	5.2	29.94	44.93	13.584	345.2	Std.	520	610	1040	1130	1280	1380	1480	1600	1730	1970
									Alt.	650	760	1040	1130	1280	1380	1480	1600	1730	1970
14	14.000		0.210	5.3	30.96	45.78	13.580	345.0	Std.	540	630	1070	1170	1330	1430	1530	1660	1790	2040
									Alt.	680	790	1070	1170	1330	1430	1530	1660	1790	2040
14	14.000		0.219	5.6	32.26	48.33	13.562	344.4	Std.	560	660	1120	1220	1380	1490	1600	1730	1860	2130
									Alt.	700	820	1120	1220	1380	1490	1600	1730	1860	2130
14	14.000		0.250	6.4	36.75	55.11	13.500	342.8	Std.	640	750	1280	1400	1580	1700	1820	1970	2130	2430
									Alt.	800	940	1280	1400	1580	1700	1820	1970	2130	2430
14	14.000		0.281	7.1	41.21	61.02	13.438	341.4	Std.	720	840	1430	1570	1770	1910	2050	2220	2390	2730
									Alt.	900	1050	1430	1570	1770	1910	2050	2220	2390	2730

Size	Outside Diameter (D)		Wall Thickness (t)		Weight (W <sub>ps</sub> )		Calculated Inside Diameter (d)		Hydrostatic test pressure (psi)														
	in.	mm	in.	mm	lb/ft	kg/m	in.	mm	Std.	Grade	Grade	Grade	Grade	Grade	Grade	Grade	Grade	Grade	Grade	Grade			
										A	B	X42	X46	X52	X56	X60	X65	X70	X80				
14	14.000	355.6	0.312	7.9	45.65	67.74	13.376	339.8	Std.	800	940	1590	1740	1910	2120	2270	2460	2650	2830	3000			
									Alt.	1030	1170	1590	1740	1910	2120	2270	2460	2650	2830	3000			
14	14.000		0.344	8.7	50.22	74.42	13.312	338.2	Std.	880	1030	1750	1920	2170	2340	2510	2720	2920	3000	3000			
									Alt.	1110	1290	1750	1920	2170	2340	2510	2720	2920	2920	3340	3000		
14	14.000		0.375	9.5	54.62	81.08	13.250	336.6	Std.	960	1130	1910	2090	2340	2550	2730	2960	3000	3000	3000			
									Alt.	1210	1410	1910	2090	2340	2550	2730	2960	3190	3190	3540	3000		
14	14.000		0.406	10.3	59.00	87.71	13.188	335.0	Std.	1040	1220	2070	2270	2560	2760	2960	3000	3000	3000	3000			
									Alt.	1310	1520	2070	2270	2560	2760	2960	3200	3450	3450	3940	3000		
14	14.000		0.438	11.1	63.50	94.30	13.124	333.4	Std.	1130	1310	2230	2450	2770	2980	3000	3000	3000	3000	3000			
									Alt.	1410	1640	2230	2450	2770	2980	3190	3460	3720	3720	4250	3000		
14	14.000		0.469	11.9	67.84	100.85	13.062	331.8	Std.	1210	1410	2380	2620	2980	3000	3000	3000	3000	3000	3000			
									Alt.	1510	1760	2380	2620	2980	3190	3420	3700	3990	3990	4560	3000		
14	14.000		0.500	12.7	72.16	107.39	13.000	330.2	Std.	1290	1500	2550	2790	3000	3000	3000	3000	3000	3000	3000			
									Alt.	1610	1880	2550	2790	3160	3400	3640	3950	4250	4660	4660	3000		
14	14.000		0.562	14.3	80.73	120.35	12.876	327.0	Std.	1450	1690	2870	3000	3000	3000	3000	3000	3000	3000	3000			
									Alt.	1810	2110	2870	3140	3550	3820	4090	4440	4790	5460	5460	3000		
14	14.000		0.625	15.9	89.36	131.19	12.750	323.8	Std.	1610	1880	3000	3000	3000	3000	3000	3000	3000	3000	3000			
									Alt.	2010	2340	3130	3490	3950	4250	4550	4930	5310	6070	6070	3000		
14	14.000		0.688	17.5	97.91	145.91	12.624	320.6	Std.	1770	2060	3000	3000	3000	3000	3000	3000	3000	3000	3000			
									Alt.	2210	2580	3510	3840	4340	4680	5010	5400	5850	6680	6680	3000		
14	14.000		0.750	19.1	106.23	158.49	12.500	317.4	Std.	1930	2250	3000	3000	3000	3000	3000	3000	3000	3000	3000			
									Alt.	2410	2820	3830	4190	4740	5100	5460	5920	6380	7260	7260	3000		
14	14.000		0.812	20.6	114.48	170.18	12.376	314.4	Std.	2090	2440	3000	3000	3000	3000	3000	3000	3000	3000	3000			
									Alt.	2610	2820	4140	4540	5130	5520	5920	6410	6900	7860	7860	3000		
14	14.000		0.875	22.2	122.77	182.52	12.250	311.2	Std.	2250	2630	3000	3000	3000	3000	3000	3000	3000	3000	3000			
									Alt.	2800	2820	4460	4890	5530	5950	6380	6910	7460	8460	8460	3000		
14	14.000		0.938	23.8	130.98	194.74	12.124	308.0	Std.	2410	2820	3000	3000	3000	3000	3000	3000	3000	3000	3000			
									Alt.	2900	2820	4780	5240	5900	6380	6830	7260	7860	8960	8960	3000		
14	14.000		1.000	25.4	138.97	206.83	12.000	304.8	Std.	2570	2890	3000	3000	3000	3000	3000	3000	3000	3000	3000			
									Alt.	2900	2820	5100	5590	6310	6800	7260	7260	7860	9160	9160	3000		
14	14.000		1.062	27.0	146.88	218.79	11.876	301.5	Std.	2730	2890	3000	3000	3000	3000	3000	3000	3000	3000	3000			
									Alt.	2800	2820	5420	5930	6710	7220	7260	7260	7860	9360	9360	3000		
14	14.000		1.125	28.6	154.84	230.63	11.750	298.4	Std.	2800	2820	3000	3000	3000	3000	3000	3000	3000	3000	3000			
									Alt.	2800	2820	5740	6260	7100	7260	7260	7260	7260	7860	9560	9560	3000	
14	14.000		1.250	31.8	170.37	253.92	11.500	292.0	Std.	2800	2820	3000	3000	3000	3000	3000	3000	3000	3000	3000			
									Alt.	2800	2820	6380	6960	7860	7860	7200	7260	7260	7260	7860	9860	9860	3000
16	16.000	406.4	0.188	4.8	31.78	47.54	15.624	398.8	Std.	420	490	840	920	1040	1120	1200	1300	1400	1400	1600			
									Alt.	530	620	840	920	1040	1120	1200	1300	1400	1400	1600	1600		
16	16.000		0.203	5.2	34.28	51.45	15.594	398.0	Std.	460	530	910	990	1120	1210	1290	1400	1510	1510	1730			
									Alt.	570	670	910	990	1120	1210	1290	1400	1510	1510	1730	1730		
16	16.000		0.219	5.6	36.95	55.35	15.562	395.2	Std.	490	570	980	1070	1210	1300	1400	1510	1630	1630	1860			
									Alt.	620	720	980	1070	1210	1300	1400	1510	1630	1630	1860	1860		
16	16.000		0.250	6.4	42.09	63.13	15.500	393.6	Std.	560	660	1120	1220	1380	1490	1590	1730	1860	1860	2130			
									Alt.	700	820	1120	1220	1380	1490	1590	1730	1860	1860	2130	2130		
16	16.000		0.281	7.1	47.22	69.91	15.438	392.2	Std.	630	740	1250	1370	1550	1670	1790	1940	2090	2090	2390			
									Alt.	790	920	1250	1370	1560	1670	1790	1940	2090	2090	2390	2390		
16	16.000		0.312	7.9	52.32	77.63	15.376	390.6	Std.	700	820	1390	1520	1720	1860	1990	2150	2320	2320	2650			
									Alt.	860	1000	1390	1520	1720	1860	1990	2150	2320	2320	2650	2650		
16	16.000		0.344	8.7	57.57	85.32	15.312	389.0	Std.	770	900	1540	1680	1900	2050	2190	2380	2560	2560	2920			
									Alt.	970	1130	1540	1680	1900	2050	2190	2380	2560	2560	2920	2920		

Note 1. 1psi=0.07031kg/cm<sup>2</sup> 2. 1lb/ft=0.45359kg/m

# HUSTEEL API 5L

Size	Outside Diameter (D)		Wall Thickness (t)		Weight (Wpc)		Calculated Inside Diameter (d)		Hydrostatic test pressure (psi)										
	In.	mm	In.	mm	lb/ft	kg/m	In.	mm	Std.	Grade A	Grade B	Grade x42	Grade x46	Grade x52	Grade x56	Grade x60	Grade x65	Grade x70	Grade x80
16	16.000	406.4	0.375	9.5	62.64	92.98	15.250	387.4	Std.	840	980	1670	1830	2070	2230	2390	2590	2190	300
									Alt.	1050	1230	1670	1830	2070	2230	2390	2590	2790	2990
16	16.000	406.4	0.406	10.3	67.68	100.61	15.188	385.8	Std.	910	1070	1810	1980	2240	2420	2590	2800	3000	300
									Alt.	1140	1330	1810	1980	2240	2420	2590	2800	3020	345
16	16.000	406.4	0.438	11.1	72.86	108.20	15.124	384.2	Std.	990	1150	1950	2140	2420	2610	2790	3000	3000	300
									Alt.	1230	1440	1950	2140	2420	2610	2790	3000	3260	363
16	16.000	406.4	0.469	11.9	77.87	115.77	15.062	382.6	Std.	1060	1230	2090	2290	2590	2790	2990	3000	3000	300
									Alt.	1320	1540	2090	2290	2590	2790	2990	3240	3490	363
16	16.000	406.4	0.500	12.7	82.85	123.30	15.000	381.0	Std.	1130	1310	2230	2440	2760	2980	3000	3000	3000	300
									Alt.	1410	1640	2230	2440	2760	2980	3190	3460	3630	362
16	16.000	406.4	0.562	14.3	92.75	138.27	14.875	372.8	Std.	1250	1460	2510	2750	3000	3000	3000	3000	3000	300
									Alt.	1580	1890	2510	2750	3110	3340	3580	3630	3630	363
16	16.000	406.4	0.625	15.9	102.72	153.11	14.750	374.6	Std.	1410	1640	2790	3000	3000	3000	3000	3000	3000	300
									Alt.	1760	2050	2790	3050	3450	3630	3630	3630	3630	363
16	16.000	406.4	0.688	17.5	112.62	167.83	14.624	371.4	Std.	1550	1810	3000	3000	3000	3000	3000	3000	3000	300
									Alt.	1940	2260	3070	3260	3630	3630	3630	3630	3630	363
16	16.000	406.4	0.750	19.1	122.27	184.42	14.500	368.2	Std.	1690	1970	3000	3000	3000	3000	3000	3000	3000	300
									Alt.	2110	2460	3350	3630	3630	3630	3630	3630	3630	363
16	16.000	406.4	0.812	20.6	131.84	195.98	14.376	365.2	Std.	1830	2130	3000	3000	3000	3000	3000	3000	3000	300
									Alt.	2280	2650	3620	3630	3630	3630	3630	3630	3630	363
16	16.000	406.4	0.875	22.2	141.48	210.33	14.250	362.0	Std.	1970	2300	3000	3000	3000	3000	3000	3000	3000	300
									Alt.	2460	2800	3630	3630	3630	3630	3630	3630	3630	363
16	16.000	406.4	0.938	23.8	151.03	224.55	14.124	358.8	Std.	2110	2460	3000	3000	3000	3000	3000	3000	3000	300
									Alt.	2640	2800	3630	3630	3630	3630	3630	3630	3630	363
16	16.000	406.4	1.000	25.4	160.35	238.64	14.000	355.6	Std.	2250	2630	3000	3000	3000	3000	3000	3000	3000	300
									Alt.	2800	2800	3630	3630	3630	3630	3630	3630	3630	363
16	16.000	406.4	1.062	27.0	169.59	252.61	13.876	352.4	Std.	2390	2790	3000	3000	3000	3000	3000	3000	3000	300
									Alt.	2800	2800	3630	3630	3630	3630	3630	3630	3630	363
16	16.000	406.4	1.125	28.6	178.89	266.45	13.750	349.2	Std.	2530	2800	3000	3000	3000	3000	3000	3000	3000	300
									Alt.	2800	2800	3630	3630	3630	3630	3630	3630	3630	363
16	16.000	406.4	1.188	30.2	188.11	280.17	13.624	346.0	Std.	2670	2800	3000	3000	3000	3000	3000	3000	3000	300
									Alt.	2800	2800	3630	3630	3630	3630	3630	3630	3630	363
16	16.000	406.4	1.250	31.8	197.10	293.76	13.500	342.8	Std.	2810	2900	3000	3000	3000	3000	3000	3000	3000	300
									Alt.	2800	2900	3630	3630	3630	3630	3630	3630	3630	363
18	18.000	457.0	0.188	4.8	35.80	53.53	17.624	447.4	Std.	380	440	750	820	920	990	1070	1150	1240	14
									Alt.	470	550	750	820	920	990	1070	1150	1240	14
18	18.000	457.0	0.219	5.6	41.63	62.34	17.562	445.8	Std.	440	510	870	950	1080	1160	1240	1340	1490	16
									Alt.	550	640	870	950	1080	1160	1240	1340	1490	16
18	18.000	457.0	0.250	6.4	47.44	71.12	17.500	444.2	Std.	500	580	990	1080	1230	1320	1420	1530	1650	18
									Alt.	630	730	990	1080	1230	1320	1420	1530	1650	18
18	18.000	457.0	0.281	7.1	53.23	78.77	17.438	442.8	Std.	560	660	1110	1220	1380	1480	1590	1730	1860	21
									Alt.	700	820	1110	1220	1380	1480	1590	1730	1860	21
18	18.000	457.0	0.312	7.9	58.99	87.49	17.376	441.2	Std.	620	730	1240	1360	1530	1650	1770	1920	2060	23
									Alt.	780	910	1240	1360	1530	1650	1770	1920	2060	23
18	18.000	457.0	0.344	8.7	64.93	96.18	17.312	439.6	Std.	690	800	1360	1490	1690	1820	1960	2110	2270	26
									Alt.	860	1000	1360	1490	1690	1820	1960	2110	2270	26
18	18.000	457.0	0.375	9.5	70.65	104.64	17.250	438.0	Std.	750	880	1490	1630	1840	1980	2130	2300	2480	28
									Alt.	940	1090	1490	1630	1840	1980	2130	2300	2480	28
18	18.000	457.0	0.406	10.3	76.36	113.46	17.188	436.4	Std.	810	960	1610	1760	1990	2150	2300	2490	2680	30
									Alt.	1020	1180	1610	1760	1990	2150	2300	2490	2680	30

Note 1. 1psi=0.0703kg/cm<sup>2</sup> 2. 1lb/ft=0.45359k



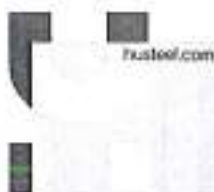


API 5L

HUSTEEL

Size	Outside Diameter (D)		Wall Thickness (t)		Weight (Vipe)		Calculated Inside Diameter (d)		Hydrostatic test pressure (psi)										
	in.	mm	in.	mm	lb/ft	kg/m	in.	mm		Grade	Grade	Grade	Grade	Grade	Grade	Grade	Grade	Grade	
										A	B	X42	X46	X52	X56	X60	X65	X70	X80
18	18.000	457.0	0.438	11.1	82.23	122.05	17.124	434.8	Std.	880	1020	1740	1900	2150	2320	2480	2690	2900	3000
									Alt.	1100	1260	1740	1900	2150	2320	2480	2690	2900	3310
18	18.000	457.0	0.489	11.9	87.89	130.62	17.062	433.2	Std.	940	1050	1690	2040	2300	2480	2660	2890	3000	3000
									Alt.	1170	1370	1690	2040	2300	2480	2660	2890	3100	3540
18	18.000	457.0	0.500	12.7	93.54	139.15	17.000	431.6	Std.	1000	1170	1580	2170	2460	2640	2830	3000	3000	3000
									Alt.	1250	1460	1580	2170	2460	2640	2830	3070	3310	3630
18	18.000	457.0	0.562	14.3	104.76	156.11	16.676	428.4	Std.	1120	1310	2230	2440	2760	2970	3000	3000	3000	3000
									Alt.	1410	1600	2230	2440	2760	2970	3180	3450	3630	3630
18	18.000	457.0	0.625	15.9	116.09	172.05	16.759	425.2	Std.	1250	1450	2490	2720	3000	3000	3000	3000	3000	3000
									Alt.	1560	1820	2490	2720	3070	3310	3540	3630	3630	3630
18	18.000	457.0	0.688	17.5	127.32	189.67	16.624	422.0	Std.	1390	1610	2730	2990	3000	3000	3000	3000	3000	3000
									Alt.	1720	2010	2730	2990	3360	3630	3630	3630	3630	3630
18	18.000	457.0	0.750	19.1	138.30	206.25	16.509	418.8	Std.	1500	1750	2980	3000	3000	3000	3000	3000	3000	3000
									Alt.	1880	2190	2980	3260	3630	3630	3630	3630	3630	3630
18	18.000	457.0	0.812	20.6	149.20	221.69	16.376	415.8	Std.	1620	1890	3000	3000	3000	3000	3000	3000	3000	3000
									Alt.	2030	2370	3220	3630	3630	3630	3630	3630	3630	3630
18	18.000	457.0	0.875	22.2	160.18	238.03	16.250	412.6	Std.	1750	2040	3000	3000	3000	3000	3000	3000	3000	3000
									Alt.	2190	2550	3470	3630	3630	3630	3630	3630	3630	3630
18	18.000	457.0	0.938	23.8	171.08	254.25	16.124	409.4	Std.	1890	2190	3000	3000	3000	3000	3000	3000	3000	3000
									Alt.	2350	2740	3630	3630	3630	3630	3630	3630	3630	3630
18	18.000	457.0	1.000	25.4	181.73	270.34	16.000	406.2	Std.	2000	2330	3000	3000	3000	3000	3000	3000	3000	3000
									Alt.	2500	2900	3630	3630	3630	3630	3630	3630	3630	3630
18	18.000	457.0	1.062	27.0	192.29	286.30	15.876	403.0	Std.	2120	2480	3000	3000	3000	3000	3000	3000	3000	3000
									Alt.	2660	3000	3630	3630	3630	3630	3630	3630	3630	3630
18	18.000	457.0	1.125	28.6	202.94	302.14	15.750	399.8	Std.	2250	2630	3000	3000	3000	3000	3000	3000	3000	3000
									Alt.	2800	3200	3630	3630	3630	3630	3630	3630	3630	3630
18	18.000	457.0	1.188	30.2	213.51	317.85	15.624	396.6	Std.	2380	2770	3000	3000	3000	3000	3000	3000	3000	3000
									Alt.	2940	3360	3630	3630	3630	3630	3630	3630	3630	3630
18	18.000	457.0	1.250	31.8	223.82	333.44	15.500	393.4	Std.	2500	2900	3000	3000	3000	3000	3000	3000	3000	3000
									Alt.	3000	3420	3630	3630	3630	3630	3630	3630	3630	3630
20	20.000	508.0	0.219	5.6	46.31	69.38	19.582	496.8	Std.	350	460	830	910	1020	1100	1180	1280	1380	1580
									Alt.	450	570	830	910	1020	1100	1180	1280	1380	1580
20	20.000	508.0	0.250	6.4	52.78	79.16	19.500	495.2	Std.	450	530	950	1040	1170	1260	1350	1460	1580	1800
									Alt.	560	660	950	1040	1170	1260	1350	1460	1580	1800
20	20.000	508.0	0.281	7.1	59.23	87.70	19.438	493.8	Std.	510	590	1060	1160	1320	1420	1520	1640	1770	2020
									Alt.	630	740	1060	1160	1320	1420	1520	1640	1770	2020
20	20.000	508.0	0.312	7.9	65.66	97.43	19.376	492.2	Std.	560	660	1180	1290	1460	1570	1680	1830	1970	2250
									Alt.	700	820	1180	1290	1460	1570	1680	1830	1970	2250
20	20.000	508.0	0.344	8.7	72.28	107.12	19.312	490.6	Std.	620	720	1300	1420	1610	1730	1850	2010	2170	2480
									Alt.	770	900	1300	1420	1610	1730	1850	2010	2170	2480
20	20.000	508.0	0.375	9.5	78.67	116.78	19.250	489.0	Std.	680	790	1420	1550	1760	1890	2030	2190	2360	2700
									Alt.	840	980	1420	1550	1760	1890	2030	2190	2360	2700
20	20.000	508.0	0.406	10.3	85.04	126.41	19.188	487.4	Std.	730	850	1530	1680	1900	2050	2190	2380	2560	2900
									Alt.	910	1070	1530	1680	1900	2050	2190	2380	2560	2900
20	20.000	508.0	0.438	11.1	91.59	136.01	19.124	485.8	Std.	790	920	1660	1810	2050	2210	2370	2560	2760	3000
									Alt.	990	1150	1660	1810	2050	2210	2370	2560	2760	3150
20	20.000	508.0	0.469	11.9	97.92	145.58	19.062	484.2	Std.	840	980	1770	1940	2190	2360	2530	2740	2950	3000
									Alt.	1060	1230	1770	1940	2190	2360	2530	2740	2950	3380
20	20.000	508.0	0.500	12.7	104.23	155.12	19.000	482.6	Std.	900	1050	1890	2070	2340	2520	2700	2900	3000	3000
									Alt.	1130	1310	1890	2070	2340	2520	2700	2900	3150	3600

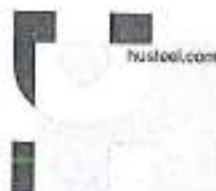
Note 1. 1psi=0.0703kg/cm<sup>2</sup> 2. 1lb/ft=0.45359kg/m



# HUSTEEL API 5L

Size	Outside Diameter (D)		Wall Thickness (t)		Weight (Wipe)		Calculated Inside Diameter (d)		Hydrostatic test pressure (psi)											
	in.	mm	in.	mm	lb/ft	kg/m	in.	mm		Grade	Grade	Grade	Grade	Grade	Grade	Grade	Grade	Grade	Grade	
										A	B	×42	×45	×52	×56	×60	×65	×70	×80	
20	20.000	508.0	0.562	14.3	116.78	174.10	18.976	479.4	Std.	1010	1180	2120	2330	2630	2830	3000	3000	3000	3000	3000
									AL	1250	1480	2120	2330	2630	2830	3000	3290	3540	3630	
20	20.000	508.0	0.625	15.9	120.45	192.95	18.750	476.2	Std.	1130	1310	2360	2590	2930	3000	3000	3000	3000	3000	3000
									AL	1410	1640	2360	2590	2930	3150	3380	3630	3630	3630	
20	20.000	508.0	0.688	17.9	142.03	216.34	18.674	472.2	Std.	1240	1440	2600	2860	3000	3000	3000	3000	3000	3000	3000
									AL	1550	1810	2600	2860	3220	3630	3630	3630	3630	3630	
20	20.000	508.0	0.750	19.1	154.34	230.27	18.500	469.8	Std.	1350	1560	2840	3000	3000	3000	3000	3000	3000	3000	3000
									AL	1660	1970	2840	3110	3610	3630	3630	3630	3630	3630	
20	20.000	508.0	0.812	20.6	166.58	247.60	18.376	466.8	Std.	1460	1710	3000	3000	3000	3000	3000	3000	3000	3000	3000
									AL	1800	2130	3070	3360	3630	3630	3630	3630	3630	3630	
20	20.000	508.0	0.875	22.2	178.89	265.95	18.250	463.6	Std.	1560	1840	3000	3000	3000	3000	3000	3000	3000	3000	3000
									AL	1970	2300	3310	3620	3630	3630	3630	3630	3630	3630	
20	20.000	508.0	0.938	23.8	191.34	284.18	18.124	460.4	Std.	1690	1970	3000	3000	3000	3000	3000	3000	3000	3000	3000
									AL	2110	2460	3590	3630	3630	3630	3630	3630	3630	3630	
20	20.000	508.0	1.000	25.4	203.11	302.28	18.000	457.2	Std.	1800	2160	3000	3000	3000	3000	3000	3000	3000	3000	3000
									AL	2250	2630	3630	3630	3630	3630	3630	3630	3630	3630	
20	20.000	508.0	1.062	27.0	215.00	320.26	17.876	454.0	Std.	1910	2330	3000	3000	3000	3000	3000	3000	3000	3000	3000
									AL	2390	2790	3630	3630	3630	3630	3630	3630	3630	3630	
20	20.000	508.0	1.125	28.6	227.00	338.11	17.750	450.8	Std.	2030	2360	3000	3000	3000	3000	3000	3000	3000	3000	3000
									AL	2530	2900	3630	3630	3630	3630	3630	3630	3630	3630	
20	20.000	508.0	1.188	30.2	238.91	356.83	17.624	447.6	Std.	2140	2490	3000	3000	3000	3000	3000	3000	3000	3000	3000
									AL	2670	2900	3630	3630	3630	3630	3630	3630	3630	3630	
20	20.000	508.0	1.250	31.8	250.95	373.43	17.500	444.4	Std.	2250	2530	3000	3000	3000	3000	3000	3000	3000	3000	3000
									AL	2800	2900	3630	3630	3630	3630	3630	3630	3630	3630	
20	20.000	508.0	1.312	33.3	262.10	389.81	17.376	441.4	Std.	2360	2760	3000	3000	3000	3000	3000	3000	3000	3000	3000
									AL	2900	2900	3630	3630	3630	3630	3630	3630	3630	3630	
20	20.000	508.0	1.375	34.9	273.76	407.17	17.250	438.2	Std.	2480	2800	3000	3000	3000	3000	3000	3000	3000	3000	3000
									AL	2900	2900	3630	3630	3630	3630	3630	3630	3630	3630	
22	22.000	569.0	0.219	5.6	50.99	76.42	21.362	547.8	Std.	350	420	750	820	930	1000	1080	1160	1250	1430	
									AL	450	520	750	820	930	1000	1080	1160	1250	1430	
22	22.000	569.0	0.250	6.4	58.13	87.21	21.500	546.2	Std.	410	480	860	940	1060	1150	1230	1300	1400	1640	
									AL	510	600	860	940	1060	1150	1230	1300	1400	1640	
22	22.000	569.0	0.281	7.1	65.24	96.63	21.438	544.8	Std.	460	540	930	1060	1200	1290	1380	1490	1610	1840	
									AL	570	670	930	1060	1200	1290	1380	1490	1610	1840	
22	22.000	569.0	0.312	7.9	72.34	107.36	21.376	543.2	Std.	510	600	1070	1170	1330	1430	1530	1660	1790	2040	
									AL	640	740	1070	1170	1330	1430	1530	1660	1790	2040	
22	22.000	569.0	0.344	8.7	79.64	118.06	21.312	541.6	Std.	560	660	1180	1290	1460	1580	1690	1830	1970	2290	
									AL	700	820	1180	1290	1460	1580	1690	1830	1970	2290	
22	22.000	569.0	0.375	9.5	86.69	128.73	21.250	540.0	Std.	610	720	1290	1410	1600	1720	1840	1990	2150	2490	
									AL	770	890	1290	1410	1600	1720	1840	1990	2150	2490	
22	22.000	569.0	0.406	10.3	93.72	139.37	21.188	538.4	Std.	660	780	1400	1530	1730	1860	1990	2160	2330	2690	
									AL	830	970	1400	1530	1730	1860	1990	2160	2330	2690	
22	22.000	569.0	0.438	11.1	100.96	149.97	21.124	536.8	Std.	720	840	1510	1650	1860	2010	2150	2330	2510	2870	
									AL	900	1050	1510	1650	1860	2010	2150	2330	2510	2870	
22	22.000	569.0	0.469	11.9	107.95	160.55	21.062	535.2	Std.	770	900	1610	1770	2000	2150	2300	2490	2690	3000	
									AL	960	1120	1610	1770	2000	2150	2300	2490	2690	3000	
22	22.000	569.0	0.500	12.7	114.92	171.09	21.000	533.6	Std.	820	950	1720	1880	2130	2290	2450	2660	2860	3000	
									AL	1020	1190	1720	1880	2130	2290	2450	2660	2860	3270	
22	22.000	569.0	0.562	14.3	128.79	192.06	20.876	530.4	Std.	920	1070	1930	2120	2360	2570	2780	2990	3000	3000	
									AL	1150	1340	1930	2120	2360	2570	2780	2990	3220	3630	

Note 1. 1psi=0.00131kg/cm<sup>2</sup> 2. 1lb/ft=0.45359kg/ft



API 5L

HUSTEEL

Size	Outside Diameter (D)		Wall Thickness (t)		Weight (Wpe)		Calculated Inside Diameter (d)		Hydrostatic test pressure (psi)											
	in.	mm	in.	mm	lb/ft	kg/m	in.	mm	Std.	Grade	Grade	Grade	Grade	Grade	Grade	Grade	Grade	Grade		
										A	B	x 42	x 46	x 52	x 56	x 60	x 65	x 70	x 80	
22	22.000	559.0	0.625	15.9	142.61	212.95	20.750	527.2	Std.	1020	1190	2150	2350	2550	2660	3000	3000	3000	3000	
									Alt.	1280	1490	2150	2350	2550	2660	2860	3070	3120	3580	3630
22	22.000		0.688	17.5	155.74	233.68	20.624	524.0	Std.	1130	1310	2360	2500	2930	3000	3000	3000	3000	3000	
									Alt.	1410	1640	2360	2500	2930	3150	3360	3630	3630	3630	3630
22	22.000		0.750	19.1	170.37	254.30	20.500	520.8	Std.	1230	1430	2580	2630	3000	3000	3000	3000	3000	3000	
									Alt.	1530	1790	2580	2630	3190	3630	3630	3630	3630	3630	3630
22	22.000		0.812	20.6	183.92	273.51	20.376	517.8	Std.	1330	1550	2790	3000	3000	3000	3000	3000	3000	3000	
									Alt.	1660	1940	2790	3000	3450	3630	3630	3630	3630	3630	3630
22	22.000		0.875	22.2	197.60	293.87	20.250	514.6	Std.	1430	1670	3000	3000	3000	3000	3000	3000	3000	3000	
									Alt.	1790	2090	3010	3250	3630	3630	3630	3630	3630	3630	3630
22	22.000		0.938	23.8	211.19	314.11	20.124	511.4	Std.	1530	1790	3000	3000	3000	3000	3000	3000	3000	3000	
									Alt.	1920	2240	3220	3530	3630	3630	3630	3630	3630	3630	3630
22	22.000		1.000	25.4	224.49	334.23	20.000	508.2	Std.	1640	1910	3000	3000	3000	3000	3000	3000	3000	3000	
									Alt.	2050	2390	3440	3630	3630	3630	3630	3630	3630	3630	3630
22	22.000		1.062	27.0	237.70	354.22	19.876	505.0	Std.	1740	2030	3000	3000	3000	3000	3000	3000	3000	3000	
									Alt.	2170	2530	3630	3630	3630	3630	3630	3630	3630	3630	3630
22	22.000		1.125	28.6	251.05	374.08	19.750	501.8	Std.	1840	2150	3000	3000	3000	3000	3000	3000	3000	3000	
									Alt.	2330	2680	3630	3630	3630	3630	3630	3630	3630	3630	3630
22	22.000		1.188	30.2	264.31	393.81	19.624	498.6	Std.	1940	2270	3000	3000	3000	3000	3000	3000	3000	3000	
									Alt.	2430	2830	3630	3630	3630	3630	3630	3630	3630	3630	3630
22	22.000		1.250	31.8	277.27	413.42	19.500	495.4	Std.	2050	2390	3000	3000	3000	3000	3000	3000	3000	3000	
									Alt.	2560	2900	3630	3630	3630	3630	3630	3630	3630	3630	3630
22	22.000		1.312	33.3	290.15	431.69	19.376	492.4	Std.	2150	2500	3000	3000	3000	3000	3000	3000	3000	3000	
									Alt.	2690	2900	3630	3630	3630	3630	3630	3630	3630	3630	3630
22	22.000		1.375	34.9	303.16	451.05	19.250	489.2	Std.	2250	2630	3000	3000	3000	3000	3000	3000	3000	3000	
									Alt.	2800	2900	3630	3630	3630	3630	3630	3630	3630	3630	3630
22	22.000		1.438	36.5	316.08	470.30	19.124	486.0	Std.	2350	2750	3000	3000	3000	3000	3000	3000	3000	3000	
									Alt.	2900	2900	3630	3630	3630	3630	3630	3630	3630	3630	3630
22	22.000		1.500	38.1	328.72	489.40	19.000	482.8	Std.	2450	2900	3000	3000	3000	3000	3000	3000	3000	3000	
									Alt.	2900	2900	3630	3630	3630	3630	3630	3630	3630	3630	3630
24	24.000	610.0	0.250	6.4	63.47	95.26	23.500	597.2	Std.	380	440	790	860	980	1060	1130	1220	1310	1500	
									Alt.	470	550	790	860	980	1060	1130	1220	1310	1500	
24	24.000		0.281	7.1	71.25	105.55	23.438	595.8	Std.	420	490	890	970	1100	1180	1260	1370	1480	1690	
									Alt.	530	610	890	970	1100	1180	1260	1370	1480	1690	
24	24.000		0.312	7.9	79.01	117.30	23.376	594.2	Std.	470	550	990	1080	1220	1310	1400	1520	1640	1870	
									Alt.	590	680	990	1080	1220	1310	1400	1520	1640	1870	
24	24.000		0.344	8.7	86.99	129.00	23.312	592.6	Std.	520	600	1090	1190	1340	1440	1550	1680	1810	2060	
									Alt.	650	750	1090	1190	1340	1440	1550	1680	1810	2060	
24	24.000		0.375	9.5	94.71	140.68	23.250	591.0	Std.	560	660	1190	1290	1460	1580	1690	1830	1970	2250	
									Alt.	700	820	1190	1290	1460	1580	1690	1830	1970	2250	
24	24.000		0.406	10.3	102.40	152.32	23.188	589.4	Std.	610	710	1290	1400	1580	1710	1830	1980	2130	2440	
									Alt.	760	890	1290	1400	1580	1710	1830	1980	2130	2440	
24	24.000		0.438	11.1	110.32	163.93	23.124	587.8	Std.	660	770	1390	1510	1710	1840	1970	2140	2300	2630	
									Alt.	820	960	1390	1510	1710	1840	1970	2140	2300	2630	
24	24.000		0.469	11.9	117.98	175.51	23.062	586.2	Std.	700	820	1490	1620	1820	1970	2110	2290	2480	2810	
									Alt.	860	1030	1490	1620	1820	1970	2110	2290	2480	2810	
24	24.000		0.500	12.7	125.61	187.06	23.000	584.6	Std.	750	880	1590	1730	1950	2100	2250	2440	2630	3000	
									Alt.	940	1090	1590	1730	1950	2100	2250	2440	2630	3000	
24	24.000		0.562	14.3	140.61	210.07	22.876	581.4	Std.	840	990	1770	1940	2190	2360	2530	2740	2950	3300	
									Alt.	1050	1230	1770	1940	2190	2360	2530	2740	2950	3370	

Note 1. 1psi=0.07031kg/cm<sup>2</sup> 2. 1lb/ft=0.45359kg/ft

Size	Outside Diameter (D)		Wall Thickness (t)		Weight (W <sub>pe</sub> )		Calculated Inside Diameter (d)		Hydrostatic test pressure (psi)										
	in.	mm	in.	mm	lb/ft	kg/m	in.	mm		Grade	Grade	Grade	Grade	Grade	Grade	Grade	Grade	Grade	Grade
										A	B	X42	X46	X52	X56	X60	X65	X70	X80
24	24.000	610.0	0.625	15.9	136.17	232.94	22.750	578.2	Std.	940	1090	1970	2160	2440	2630	2810	3000	3000	3000
									Alt.	1170	1370	1970	2160	2440	2630	2810	3000	3000	3000
24	24.000		0.688	17.5	171.45	255.69	22.624	575.0	Std.	1030	1200	2170	2370	2640	2890	3000	3000	3000	3000
									Alt.	1290	1510	2170	2370	2640	2890	3100	3350	3610	3630
24	24.000		0.750	19.1	186.41	278.32	22.500	571.8	Std.	1130	1310	2360	2590	2900	3000	3000	3000	3000	3000
									Alt.	1410	1640	2360	2590	2900	3150	3380	3630	3630	3630
24	24.000		0.812	20.6	201.28	299.41	22.376	568.8	Std.	1220	1420	2560	2800	3000	3000	3000	3000	3000	3000
									Alt.	1520	1780	2560	2800	3170	3630	3630	3630	3630	3630
24	24.000		0.875	22.2	216.31	321.79	22.250	565.6	Std.	1310	1530	2750	3000	3000	3000	3000	3000	3000	3000
									Alt.	1640	1910	2750	3000	3410	3630	3630	3630	3630	3630
24	24.000		0.938	23.8	231.25	344.65	22.124	562.4	Std.	1410	1640	2950	3000	3000	3000	3000	3000	3000	3000
									Alt.	1700	2050	2950	3240	3630	3630	3630	3630	3630	3630
24	24.000		1.000	25.4	245.87	366.17	22.000	559.2	Std.	1500	1790	3000	3000	3000	3000	3000	3000	3000	3000
									Alt.	1880	2190	3150	3450	3630	3630	3630	3630	3630	3630
24	24.000		1.062	27.0	260.41	388.17	21.876	556.0	Std.	1590	1860	3000	3000	3000	3000	3000	3000	3000	3000
									Alt.	1990	2320	3350	3630	3630	3630	3630	3630	3630	3630
24	24.000		1.125	28.6	275.10	410.05	21.750	552.8	Std.	1690	1970	3000	3000	3000	3000	3000	3000	3000	3000
									Alt.	2110	2460	3540	3630	3630	3630	3630	3630	3630	3630
24	24.000		1.188	30.2	289.71	431.80	21.624	549.6	Std.	1780	2080	3000	3000	3000	3000	3000	3000	3000	3000
									Alt.	2230	2600	3630	3630	3630	3630	3630	3630	3630	3630
24	24.000		1.250	31.8	304.00	453.42	21.500	546.4	Std.	1880	2190	3000	3000	3000	3000	3000	3000	3000	3000
									Alt.	2340	2730	3630	3630	3630	3630	3630	3630	3630	3630
24	24.000		1.312	33.3	318.21	473.57	21.376	543.4	Std.	1970	2300	3000	3000	3000	3000	3000	3000	3000	3000
									Alt.	2460	2900	3630	3630	3630	3630	3630	3630	3630	3630
24	24.000		1.375	34.9	332.56	494.95	21.250	540.2	Std.	2050	2410	3000	3000	3000	3000	3000	3000	3000	3000
									Alt.	2580	2800	3630	3630	3630	3630	3630	3630	3630	3630
24	24.000		1.438	36.5	346.83	516.20	21.124	537.0	Std.	2160	2500	3000	3000	3000	3000	3000	3000	3000	3000
									Alt.	2700	2900	3630	3630	3630	3630	3630	3630	3630	3630
24	24.000		1.500	38.1	360.79	537.33	21.000	533.8	Std.	2250	2630	3000	3000	3000	3000	3000	3000	3000	3000
									Alt.	2800	2900	3630	3630	3630	3630	3630	3630	3630	3630
24	24.000		1.562	39.7	374.66	558.32	20.876	530.6	Std.	2340	2730	3000	3000	3000	3000	3000	3000	3000	3000
									Alt.	2900	2800	3630	3630	3630	3630	3630	3630	3630	3630

Note 1. 1psi = 0.070307kg/cm<sup>2</sup> 2. 1lb/ft = 0.45359kg/m

# ASTM A53 Black and Hot-Dipped, Zinc-Coated Welded Steel Pipes

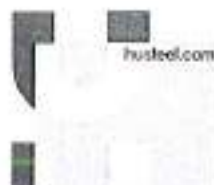


## 1) Dimensions, Weights, and Test Pressures for Plain End Pipe

NPS Designator	DN Designator	Outside Diameter, in. [mm]	Nominal Wall Thickness, in. [mm]	Nominal Weight (Mass) per Unit Length, Plain End, lb/ft [kg/m]	Weight Class	Schedule No.	Test Pressure, psi [kPa]	
							Grade A	Grade B
1/2	15	0.84[21.3]	0.109[2.77]	0.85[1.27]	STD	40	700[4800]	700[4800]
			0.147[3.73]	1.09[1.62]	XS	80	850[5900]	850[5900]
			0.189[4.78]	1.31[1.95]	...	160	900[6200]	900[6200]
			0.294[7.47]	1.72[2.55]	XXS	...	1000[6900]	1000[6900]
3/4	20	1.05[26.7]	0.113[2.87]	1.13[1.69]	STD	40	700[4800]	700[4800]
			0.154[3.91]	1.48[2.20]	XS	80	850[5900]	850[5900]
			0.219[5.56]	1.95[2.90]	...	160	950[6800]	950[6800]
			0.308[7.82]	2.40[3.64]	XXS	...	1000[6900]	1000[6900]
1	25	1.315[33.4]	0.133[3.38]	1.68[2.50]	STD	40	700[4800]	700[4800]
			0.179[4.55]	2.17[3.24]	XS	80	850[5900]	850[5900]
			0.250[6.35]	2.85[4.24]	...	160	950[6800]	950[6800]
			0.388[9.90]	3.66[5.45]	XXS	...	1000[6900]	1000[6900]
1 1/4	32	1.660[42.2]	0.140[3.56]	2.27[3.39]	STD	40	1200[8300]	1300[9000]
			0.191[4.85]	3.00[4.47]	XS	80	1800[12400]	1900[13100]
			0.250[6.35]	3.71[5.61]	...	160	1900[13100]	2000[13900]
			0.382[9.70]	5.22[7.77]	XXS	...	2200[15200]	2300[15900]
1 1/2	40	1.900[48.3]	0.145[3.68]	2.72[4.05]	STD	40	1200[8300]	1300[9000]
			0.200[5.08]	3.63[5.41]	XS	80	1800[12400]	1900[13100]
			0.281[7.14]	4.86[7.25]	...	160	1950[13400]	2050[14100]
			0.400[10.16]	6.41[9.56]	XXS	...	2200[15200]	2300[15900]
2	50	2.315[60.3]	0.154[3.91]	3.68[5.44]	STD	40	2300[15900]	2500[17200]
			0.218[5.54]	5.03[7.48]	XS	80	2500[17200]	2500[17200]
			0.344[8.74]	7.47[11.11]	...	160	2500[17200]	2500[17200]
			0.436[11.07]	9.04[13.44]	XXS	...	2500[17200]	2500[17200]
2 1/2	65	2.875[73.0]	0.203[5.16]	5.80[8.63]	STD	40	2500[17200]	2500[17200]
			0.276[7.01]	7.67[11.41]	XS	80	2500[17200]	2500[17200]
			0.375[9.52]	10.02[14.90]	...	160	2500[17200]	2500[17200]
			0.552[14.02]	13.71[20.39]	XXS	...	2500[17200]	2500[17200]
3	80	3.500[88.9]	0.125[3.18]	4.51[6.72]	...	...	1290[8900]	1500[10300]
			0.156[3.96]	5.98[8.29]	...	...	1600[11000]	1870[12900]
			0.188[4.78]	8.66[12.92]	...	...	1930[13300]	2260[15600]
			0.216[5.49]	7.58[11.29]	STD	40	2280[15300]	2500[17200]
			0.250[6.35]	8.62[12.93]	...	...	2500[17200]	2500[17200]
			0.281[7.14]	9.67[14.40]	...	...	2500[17200]	2500[17200]
			0.300[7.62]	10.26[15.27]	XS	80	2500[17200]	2500[17200]
			0.438[11.13]	14.34[21.35]	...	160	2500[17200]	2500[17200]
3 1/2	90	4.000[101.6]	0.125[3.18]	5.18[7.72]	...	...	1120[7700]	1310[9300]
			0.126[3.26]	5.41[9.53]	...	...	1400[9700]	1640[11300]
			0.188[4.78]	7.65[11.41]	...	...	1690[11700]	1970[13900]
			0.226[5.74]	9.12[13.57]	STD	40	2030[14000]	2370[16300]
			0.250[6.35]	10.02[14.92]	...	...	2250[15500]	2500[17200]
			0.281[7.14]	11.17[16.63]	...	...	2500[17200]	2500[17200]
			0.318[8.08]	12.52[18.63]	XS	80	2800[19300]	2800[19300]
			...	...	...	...	...	...
4	100	4.500[114.3]	0.125[3.18]	5.85[8.71]	...	...	1000[6900]	1170[8100]
			0.156[3.96]	7.24[10.78]	...	...	1250[8800]	1460[10100]
			0.188[4.78]	8.67[12.91]	...	...	1500[10300]	1750[12100]
			0.216[5.56]	10.02[14.91]	...	...	1750[12100]	2040[14100]
			0.237[6.02]	10.80[16.07]	STD	40	1900[13100]	2210[15200]
			0.250[6.35]	11.38[16.90]	...	...	2000[13800]	2330[16100]
			0.281[7.14]	12.67[18.87]	...	...	2250[15100]	2620[18100]
			0.312[7.92]	13.97[20.78]	...	...	2500[17200]	2800[19300]

Note 1. 1psi = 0.07031kg/cm<sup>2</sup> 2. 1lb/ft = 0.45359kg/m

NPS Designator	DN Designator	Outside Diameter, in. [mm]	Nominal Wall Thickness, in. [mm]	Nominal Weight (Mass) per Unit Length, Pounds Fmt, lb/ft [kg/m]	Weight Class	Schedule No.	Test Pressure, ps [kPa]	
							Grade A	Grade B
5	125	5.563 [141.3]	0.331 [8.56]	15.00 [22.37]	XS	80	2700 [18600]	2800 [19300]
			0.438 [11.13]	19.00 [28.32]	...	120	2800 [19300]	2900 [19300]
			0.531 [13.49]	22.53 [33.54]	...	160	2800 [19300]	2900 [19300]
			0.674 [17.12]	27.57 [41.03]	XXS	...	2800 [19300]	2900 [19300]
			0.156 [3.96]	9.02 [13.41]	...	...	1010 [7000]	1180 [8100]
			0.189 [4.78]	10.80 [16.09]	...	...	1220 [8400]	1420 [9800]
			0.219 [5.56]	12.51 [18.61]	...	...	1420 [9800]	1650 [11400]
			0.258 [6.55]	14.63 [21.77]	STD	40	1630 [11500]	1950 [13400]
			0.281 [7.14]	15.87 [23.62]	...	...	1820 [12500]	2120 [14800]
			0.311 [7.92]	17.51 [26.05]	...	...	2020 [13900]	2360 [16300]
			0.344 [8.74]	19.19 [28.57]	...	...	2230 [15400]	2600 [17900]
			0.375 [9.52]	20.80 [30.94]	XS	60	2430 [16800]	2800 [19300]
0.500 [12.70]	27.06 [40.28]	...	120	2800 [19300]	2800 [19300]			
0.625 [15.88]	32.99 [49.11]	...	160	2800 [19300]	2800 [19300]			
0.750 [19.05]	38.59 [57.43]	XXS	...	2800 [19300]	2800 [19300]			
6	150	6.625 [168.3]	0.188 [4.78]	12.94 [19.27]	...	...	1020 [7000]	1190 [8200]
			0.219 [5.56]	15.00 [22.31]	...	...	1190 [8200]	1390 [9600]
			0.250 [6.35]	17.04 [25.26]	...	...	1360 [9400]	1580 [10800]
			0.280 [7.11]	18.99 [28.25]	STD	40	1520 [10500]	1780 [12300]
			0.312 [7.92]	21.06 [31.32]	...	...	1700 [11700]	1980 [13700]
			0.344 [8.74]	23.10 [34.39]	...	...	1870 [12900]	2160 [15000]
			0.375 [9.52]	25.05 [37.28]	...	...	2040 [14100]	2360 [16400]
			0.432 [10.97]	28.60 [42.56]	XS	60	2350 [16300]	2740 [18900]
			0.562 [14.27]	36.43 [54.20]	...	120	2800 [19300]	2800 [19300]
			0.719 [18.26]	45.38 [67.56]	...	160	2800 [19300]	2800 [19300]
			0.884 [22.95]	53.21 [79.22]	XXS	...	2800 [19300]	2800 [19300]
			8	200	8.625 [219.1]	0.188 [4.78]	16.95 [25.26]	...
0.203 [5.16]	18.28 [27.22]	...				...	850 [5900]	1000 [6900]
0.219 [5.56]	19.68 [29.29]	...				...	910 [6300]	1070 [7400]
0.250 [6.35]	22.38 [33.31]	...				20	1040 [7200]	1220 [8400]
0.277 [7.04]	24.72 [36.31]	...				30	1160 [7800]	1350 [9300]
0.312 [7.92]	27.73 [41.24]	...				...	1300 [9000]	1520 [10500]
0.332 [8.18]	28.58 [42.55]	STD				40	1340 [9200]	1570 [10800]
0.344 [8.74]	30.45 [45.34]	...				...	1440 [9900]	1680 [11600]
0.375 [9.52]	33.07 [49.20]	...				...	1570 [10900]	1800 [12600]
0.406 [10.31]	35.67 [53.08]	...				60	1700 [11700]	2000 [13800]
0.438 [11.13]	38.33 [57.08]	...				...	1830 [12600]	2130 [14700]
0.500 [12.70]	43.43 [64.64]	XS				80	2090 [14400]	2430 [16800]
0.594 [15.09]	51.00 [75.92]	...	100	2500 [17200]	2800 [19300]			
0.719 [18.26]	60.73 [90.44]	...	120	2800 [19300]	2800 [19300]			
0.812 [20.62]	67.82 [100.92]	...	140	2800 [19300]	2800 [19300]			
0.875 [22.22]	72.49 [107.88]	XXS	...	2800 [19300]	2800 [19300]			
0.906 [23.01]	74.76 [111.27]	...	160	2800 [19300]	2800 [19300]			
10	250	10.750 [273.0]	0.188 [4.78]	21.23 [31.62]	...	...	630 [4300]	730 [5000]
			0.203 [5.16]	22.89 [34.08]	...	...	680 [4700]	800 [5600]
			0.219 [5.56]	24.63 [36.67]	...	...	730 [5000]	860 [5900]
			0.250 [6.35]	28.06 [41.75]	...	20	840 [5800]	980 [6800]
			0.279 [7.09]	31.23 [46.49]	...	...	930 [6400]	1080 [7500]
			0.307 [7.80]	34.27 [51.01]	...	30	1030 [7100]	1200 [8300]
			0.344 [8.74]	38.27 [56.96]	...	...	1150 [7900]	1340 [9200]
			0.365 [9.27]	40.52 [60.29]	STD	40	1220 [8400]	1430 [9900]
			0.438 [11.13]	49.28 [71.87]	...	...	1470 [10100]	1710 [11800]
			0.500 [12.70]	54.79 [81.52]	XS	60	1670 [11500]	1950 [13400]
			0.594 [15.09]	64.48 [95.97]	...	80	1990 [13700]	2320 [16000]
			0.719 [18.26]	77.10 [114.70]	...	100	2410 [16600]	2800 [19300]
0.844 [21.41]	89.38 [133.00]	...	120	2800 [19300]	2800 [19300]			
1.000 [25.40]	104.23 [155.09]	XXS	140	2800 [19300]	2800 [19300]			
1.125 [28.57]	115.75 [172.21]	...	160	2800 [19300]	2800 [19300]			
12	300	12.750 [323.8]	0.200 [5.16]	27.23 [40.55]	...	...	570 [3900]	670 [4600]
			0.219 [5.56]	29.34 [43.63]	...	...	620 [4300]	720 [5000]
			0.250 [6.35]	33.41 [49.71]	...	20	710 [4900]	820 [5700]
			0.281 [7.14]	37.46 [55.75]	...	...	790 [5400]	930 [6400]
			0.312 [7.92]	41.48 [61.69]	...	...	880 [6100]	1030 [7100]
			0.330 [8.38]	43.81 [65.18]	...	30	930 [6400]	1090 [7500]
			0.344 [8.74]	45.62 [67.90]	...	...	970 [6700]	1130 [7800]
			0.375 [9.52]	49.61 [73.78]	STD	...	1060 [7300]	1240 [8500]



ASTM A53

HUSTEEL

NPS Designator	DN Designator	Outside Diameter, in. [mm]	Nominal Wall Thickness, in. [mm]	Nominal Weight [Mass] per Unit Length, Poin End, lb/ft [kg/m]	Weight Class	Schedule No.	Test Pressure, psi [kPa]	
							Grade A	Grade B
14	350	14.000 [355.6]	0.406 [10.31]	53.51 [79.70]	...	40	1150 [7900]	1340 [9300]
			0.438 [11.13]	57.69 [85.82]	...	...	1240 [8500]	1440 [9900]
			0.500 [12.70]	65.48 [97.43]	XS	...	1410 [9700]	1650 [11400]
			0.562 [14.27]	73.27 [108.92]	...	60	1580 [11000]	1850 [12800]
			0.688 [17.48]	88.71 [132.04]	...	80	1940 [13400]	2270 [15700]
			0.800 [21.46]	107.42 [159.86]	...	100	2360 [16500]	2780 [19500]
			1.000 [25.40]	125.61 [186.91]	XPS	120	2800 [19300]	2800 [19300]
			1.125 [28.57]	139.81 [200.00]	...	140	2800 [19300]	2800 [19300]
			1.312 [33.32]	160.42 [238.68]	...	160	2800 [19300]	2800 [19300]
			0.210 [5.33]	30.96 [46.04]	...	...	540 [3700]	630 [4300]
			0.219 [5.56]	32.26 [47.99]	...	...	560 [3900]	660 [4500]
			0.250 [6.35]	36.75 [54.69]	...	10	640 [4400]	750 [5200]
			0.281 [7.14]	41.21 [61.35]	...	...	720 [5000]	840 [5800]
			0.312 [7.92]	45.65 [67.50]	...	20	800 [5500]	940 [6500]
			0.344 [8.74]	50.22 [74.76]	...	...	880 [6100]	1030 [7100]
			0.375 [9.52]	54.62 [81.25]	STD	30	960 [6600]	1120 [7700]
			0.438 [11.13]	63.50 [94.55]	...	40	1130 [7800]	1310 [9000]
			0.469 [11.91]	67.84 [100.94]	...	...	1210 [8300]	1410 [9100]
			0.500 [12.70]	72.16 [107.39]	XS	...	1290 [8900]	1500 [10300]
			0.594 [15.09]	85.13 [126.71]	...	60	1530 [10600]	1790 [12900]
0.750 [19.05]	106.23 [158.10]	...	80	1930 [13300]	2250 [15500]			
0.938 [23.83]	130.98 [194.96]	...	100	2410 [16800]	2800 [19300]			
1.094 [27.75]	150.93 [224.65]	...	120	2800 [19300]	2800 [19300]			
1.250 [31.75]	170.37 [253.56]	...	140	2800 [19300]	2800 [19300]			
1.406 [35.71]	189.29 [281.70]	...	160	2800 [19300]	2800 [19300]			
2.000 [50.80]	256.56 [381.80]	...	...	2800 [19300]	2800 [19300]			
2.125 [53.97]	269.76 [401.44]	...	...	2800 [19300]	2800 [19300]			
2.200 [55.88]	277.51 [413.01]	...	...	2800 [19300]	2800 [19300]			
2.500 [63.50]	307.34 [457.40]	...	...	2800 [19300]	2800 [19300]			
16	400	16.000 [406.4]	0.219 [5.56]	36.95 [54.95]	...	...	480 [3300]	570 [3900]
			0.250 [6.35]	42.03 [62.64]	...	10	560 [3900]	660 [4500]
			0.281 [7.14]	47.22 [70.30]	...	...	630 [4300]	740 [5100]
			0.312 [7.92]	52.32 [77.83]	...	20	700 [4800]	820 [5700]
			0.344 [8.74]	57.57 [86.71]	...	...	770 [5300]	900 [6200]
			0.375 [9.52]	62.64 [93.17]	STD	30	840 [5800]	980 [6800]
			0.438 [11.13]	72.85 [108.49]	...	...	960 [6600]	1150 [7900]
			0.469 [11.91]	77.67 [115.85]	...	...	1050 [7300]	1230 [8500]
			0.500 [12.70]	82.85 [123.30]	XS	40	1120 [7700]	1310 [9000]
			0.656 [16.66]	107.60 [160.12]	...	60	1480 [10200]	1720 [11900]
			0.804 [21.44]	136.74 [203.53]	...	80	1900 [13100]	2220 [15300]
			1.031 [26.19]	164.98 [245.56]	...	100	2320 [16000]	2710 [18700]
			1.219 [30.96]	192.61 [286.64]	...	120	2740 [18900]	2800 [19300]
			1.438 [36.53]	223.85 [333.19]	...	140	2800 [19300]	2800 [19300]
1.594 [40.49]	245.48 [365.35]	...	160	2800 [19300]	2800 [19300]			
18	450	18.000 [457]	0.250 [6.35]	47.44 [70.60]	...	10	560 [3900]	660 [4500]
			0.281 [7.14]	53.23 [79.24]	...	...	630 [4300]	740 [5100]
			0.312 [7.92]	58.99 [87.15]	...	20	700 [4800]	820 [5700]
			0.344 [8.74]	64.93 [96.66]	...	...	770 [5300]	900 [6200]
			0.375 [9.52]	70.65 [105.10]	STD	...	840 [5800]	980 [6800]
			0.406 [10.31]	76.38 [113.62]	...	...	910 [6300]	1060 [7400]
			0.438 [11.13]	82.23 [122.43]	...	30	980 [6800]	1150 [7900]
			0.469 [11.91]	87.89 [130.79]	...	...	1050 [7300]	1230 [8500]
			0.500 [12.70]	93.54 [139.20]	XS	...	1120 [7700]	1310 [9000]
			0.652 [14.27]	104.76 [155.87]	...	40	1420 [10000]	1660 [11800]
			0.750 [19.05]	138.30 [205.83]	...	60	1900 [13100]	2220 [15300]
			0.938 [23.83]	171.08 [254.67]	...	80	2320 [16000]	2710 [18700]
			1.156 [29.36]	208.15 [309.76]	...	100	2710 [19000]	2800 [19300]
			1.375 [34.92]	244.37 [363.64]	...	120	2750 [19000]	2800 [19300]
1.562 [39.67]	274.48 [408.45]	...	140	2800 [19300]	2800 [19300]			
1.781 [45.24]	308.79 [459.59]	...	160	2800 [19300]	2800 [19300]			
20	500	20.000 [508]	0.250 [6.35]	52.18 [78.55]	...	10	450 [3100]	530 [3600]
			0.281 [7.14]	59.23 [88.19]	...	...	510 [3500]	590 [4100]
			0.312 [7.92]	65.66 [97.67]	...	...	560 [3900]	660 [4500]
			0.344 [8.74]	72.28 [107.60]	...	...	620 [4300]	720 [5000]
			0.375 [9.52]	78.67 [117.02]	STD	20	690 [4700]	790 [5400]
			0.406 [10.31]	84.04 [126.53]	...	...	730 [5000]	850 [5900]
			0.438 [11.13]	91.59 [136.37]	...	...	790 [5400]	920 [6300]

Note 1. 1psi=0.0031kg/cm<sup>2</sup> 2. 1lb/ft=0.45359kg/m



NPS Designator	DN Designator	Outside Diameter, in. [mm]	Nominal Wall Thickness, in. [mm]	Nominal Weight [Mass] per Unit Length, Plain End, lb/ft [kg/m]	Weight Class	Schedule No.	Test Pressure, psi [kPa]	
							Grade A	Grade B
24	600	24.000[610]	0.469[11.91]	97.92[145.70]	...	...	850[5900]	960[6500]
			0.500[12.70]	104.23[155.12]	XS	30	900[6200]	1050[7200]
			0.594[15.09]	123.23[181.42]	...	40	1170[8100]	1250[8600]
			0.812[20.62]	166.56[247.83]	...	60	1460[10200]	1710[11800]
			1.031[26.19]	209.06[311.17]	...	80	1860[13200]	2170[15000]
			1.281[32.54]	256.34[381.53]	...	100	2310[15900]	2650[18900]
			1.500[38.10]	296.65[441.49]	...	120	2700[18900]	2800[19300]
			1.750[44.45]	341.41[508.11]	...	140	2800[19300]	2800[19300]
			1.969[50.01]	379.53[564.81]	...	160	2800[19300]	2800[19300]
			0.250[6.35]	83.47[94.46]	...	10	380[2600]	440[3000]
			0.281[7.14]	71.25[106.08]	...	...	420[2900]	490[3400]
			0.312[7.92]	79.01[117.51]	...	...	470[3200]	550[3800]
			0.344[8.74]	86.99[129.50]	...	...	520[3600]	600[4100]
			0.375[9.52]	94.71[140.89]	STD	20	590[3900]	660[4500]
			0.406[10.31]	102.40[152.37]	...	...	610[4200]	710[4900]
			0.438[11.13]	110.32[164.29]	...	...	660[4500]	710[5100]
			0.469[11.91]	117.98[175.54]	...	...	700[4800]	820[5700]
			0.500[12.70]	125.61[186.94]	XS	...	750[5200]	880[6100]
			0.562[14.27]	140.61[209.90]	...	30	840[5800]	980[6800]
			0.668[17.48]	171.45[255.24]	...	40	1030[7100]	1200[8300]
			0.938[23.83]	231.25[344.23]	...	...	1410[9700]	1640[11300]
			0.969[24.61]	238.57[355.02]	...	60	1450[10000]	1700[11700]
			1.219[30.96]	296.86[441.70]	...	80	1830[12900]	2130[14700]
			1.531[38.89]	367.74[547.33]	...	100	2300[15900]	2680[18900]
1.812[46.02]	429.79[639.58]	...	120	2720[18800]	2800[19300]			
2.062[52.37]	493.57[719.63]	...	140	2800[19300]	2800[19300]			
2.344[59.54]	542.64[807.63]	...	160	2800[19300]	2800[19300]			

Note 1. 1psi = 0.07031kg/cm<sup>2</sup> 2. 1lb/ft = 0.45359kg/m



## 2) Dimensions, Weights, and Test Pressures for Threaded and Coupled Pipe

NPS Designator	DN Designator	Outside Diameter, In. [mm]	Nominal Wall Thickness, In. [mm]	Nominal Weight [Mass] per Unit Length, Threaded and Coupled, lb/ft [kg/m]	Weight Class	Schedule No.	Test Pressure, psi [kPa]	
							Grade A	Grade B
1/2	15	0.840 [21.3]	0.105 [2.71]	0.85 [1.27]	STD	40	700 [4800]	700 [4800]
			0.147 [3.73]	1.05 [1.62]	XS	80	850 [5900]	850 [5900]
			0.294 [7.47]	1.72 [2.54]	XXS	...	1000 [6900]	1000 [6900]
3/4	20	1.050 [26.7]	0.113 [2.87]	1.14 [1.59]	STD	40	700 [4800]	700 [4800]
			0.154 [3.91]	1.48 [2.21]	XS	80	850 [5900]	850 [5900]
			0.308 [7.82]	2.45 [3.64]	XXS	...	1000 [6900]	1000 [6900]
1	25	1.315 [33.4]	0.133 [3.38]	1.69 [2.50]	STD	40	700 [4800]	700 [4800]
			0.179 [4.55]	2.19 [3.25]	XS	80	850 [5900]	850 [5900]
			0.358 [9.09]	3.66 [5.45]	XXS	...	1000 [6900]	1000 [6900]
1 1/4	32	1.660 [42.2]	0.140 [3.56]	2.28 [3.40]	STD	40	1000 [6900]	1100 [7600]
			0.191 [4.85]	3.03 [4.49]	XS	80	1500 [10300]	1600 [11000]
			0.382 [9.70]	5.23 [7.76]	XXS	...	1800 [12400]	1900 [13100]
1 1/2	40	1.900 [48.3]	0.145 [3.68]	2.74 [4.04]	STD	40	1000 [6900]	1100 [7600]
			0.200 [5.08]	3.65 [5.39]	XS	80	1500 [10300]	1600 [11000]
			0.400 [10.16]	6.41 [9.56]	XXS	...	1800 [12400]	1900 [13100]
2	50	2.375 [60.3]	0.154 [3.91]	3.69 [5.46]	STD	40	2300 [15900]	2500 [17200]
			0.210 [5.34]	5.08 [7.55]	XS	80	2500 [17200]	2500 [17200]
			0.438 [11.07]	9.06 [13.44]	XXS	...	2500 [17200]	2500 [17200]
2 1/2	65	2.835 [73.0]	0.203 [5.16]	5.85 [8.67]	STD	40	2500 [17200]	2500 [17200]
			0.276 [7.01]	7.75 [11.52]	XS	80	2500 [17200]	2500 [17200]
			0.552 [14.02]	13.72 [20.39]	XXS	...	2500 [17200]	2500 [17200]
3	80	3.500 [88.9]	0.216 [5.49]	7.08 [11.35]	STD	40	2300 [15900]	2500 [17200]
			0.300 [7.62]	10.35 [15.39]	XS	80	2500 [17200]	2500 [17200]
			0.600 [15.24]	18.60 [27.66]	XXS	...	2500 [17200]	2500 [17200]
3 1/2	90	4.000 [101.6]	0.226 [5.74]	9.27 [13.71]	STD	40	2000 [13800]	2400 [16500]
			0.318 [8.08]	12.67 [18.82]	XS	80	2800 [19300]	2800 [19300]
			0.237 [6.02]	10.92 [16.23]	STD	40	1900 [13100]	2200 [15200]
4	100	4.500 [114.3]	0.337 [8.56]	15.20 [22.60]	XS	80	2700 [18600]	2800 [19300]
			0.674 [17.12]	27.62 [41.09]	XXS	...	2800 [19300]	2800 [19300]
			0.258 [6.55]	14.90 [22.07]	STD	40	1700 [11700]	1900 [13100]
5	125	5.563 [141.3]	0.375 [9.52]	21.04 [31.42]	XS	80	2400 [16300]	2800 [19300]
			0.750 [19.05]	38.63 [57.53]	XXS	...	2800 [19300]	2800 [19300]
			0.280 [7.11]	19.34 [28.58]	STD	40	1500 [10300]	1800 [12400]
6	150	6.625 [168.3]	0.432 [10.97]	28.89 [43.05]	XS	80	2300 [15900]	2700 [18600]
			0.864 [21.95]	53.19 [79.18]	XXS	...	2800 [19300]	2800 [19300]
			0.277 [7.04]	25.53 [38.07]	...	30	1200 [8300]	1300 [9000]
8	200	8.625 [219.1]	0.322 [8.18]	29.35 [43.73]	STD	40	1300 [9000]	1600 [11000]
			0.500 [12.70]	44.00 [65.41]	XS	80	2100 [14500]	2400 [16500]
			0.875 [22.22]	72.69 [107.94]	XXS	...	2800 [19300]	2800 [19300]
10	250	10.750 [273.0]	0.278 [7.09]	32.33 [48.80]	...	...	950 [6500]	1100 [7600]
			0.307 [7.80]	35.33 [53.27]	...	...	1000 [6900]	1200 [8300]
			0.365 [9.27]	41.49 [60.36]	STD	40	1200 [8300]	1400 [9700]
12	300	12.750 [323.8]	0.500 [12.70]	55.55 [83.17]	XS	80	1700 [11700]	2000 [13800]
			0.330 [8.38]	45.47 [67.32]	...	30	950 [6500]	1100 [7600]
			0.375 [9.52]	51.28 [76.21]	STD	...	1100 [7600]	1200 [8300]
			0.500 [12.70]	66.91 [99.4]	XS	...	1400 [9700]	1600 [11000]

Note 1. 1psi = 0.07031kg/cm<sup>2</sup> 2. 1lb/ft = 0.45359kg/ft

## ASTM A500 Round Tubes

Nominal Size	Outside Diameter		Wall Thickness		Weight		
	in	mm	in.	mm	lb/ft	kg/ft	kg/m
1/2	0.840	21.3	0.109	2.77	0.85	0.39	1.27
3/4	1.050	26.7	0.113	2.87	1.13	0.51	1.69
1	1.315	33.4	0.104	2.64	1.34	0.61	2.00
1 1/4	1.660	42.2	0.110	2.79	1.81	0.82	2.71
	1.660	42.2	0.140	3.56	2.27	1.03	3.39
	1.660	42.2	0.191	4.85	3.00	1.36	4.47
1 1/2	1.900	48.3	0.114	2.90	2.17	0.98	3.25
	1.900	48.3	0.145	3.68	2.72	1.23	4.05
	1.900	48.3	0.200	5.08	3.63	1.64	5.41
2	2.375	60.3	0.121	3.07	2.92	1.32	4.33
	2.375	60.3	0.154	3.91	3.65	1.66	5.44
	2.375	60.3	0.218	5.54	5.02	2.28	7.40
2 1/2	2.875	73.0	0.156	3.96	4.53	2.05	6.74
	2.875	73.0	0.188	4.78	5.40	2.45	8.04
	2.875	73.0	0.203	5.16	5.79	2.63	8.63
	2.875	73.0	0.275	7.01	7.65	3.47	11.41
3	3.500	88.9	0.156	3.96	5.58	2.53	8.29
	3.500	88.9	0.188	4.78	6.63	3.01	9.92
	3.500	88.9	0.216	5.49	7.58	3.44	11.29
3 1/2	4.000	101.6	0.156	3.96	6.40	2.90	9.53
	4.000	101.6	0.188	4.78	7.63	3.46	11.41
	4.000	101.6	0.226	5.74	9.11	4.13	13.57
4	4.500	114.3	0.156	3.96	7.25	3.29	10.78
	4.500	114.3	0.188	4.78	8.64	3.92	12.91
	4.500	114.3	0.219	5.56	10.00	4.54	14.91
	4.500	114.3	0.237	6.02	10.79	4.89	16.07
	4.500	114.3	0.337	8.56	14.98	6.79	22.32
5	5.563	141.3	0.258	6.55	14.62	6.63	21.77
	5.563	141.3	0.315	8.00	20.78	9.43	30.97
6	6.625	168.3	0.280	7.11	18.97	8.60	28.26
8	8.625	219.1	0.322	8.18	28.95	12.95	42.55
	8.625	219.1	0.500	12.70	43.39	19.68	64.64
10	10.750	273.0	0.365	9.27	40.48	18.36	60.29
	10.750	273.0	0.500	12.70	54.74	24.83	81.52
12	12.750	323.8	0.375	9.53	49.95	22.48	73.78
	12.750	323.8	0.500	12.70	65.42	29.67	97.43
14	14.000	355.6	0.375	9.52	54.57	24.75	81.25
	14.000	355.6	0.500	12.70	72.09	32.70	107.39
16	16.000	406.4	0.375	9.52	62.58	28.39	93.17
	16.000	406.4	0.500	12.70	82.77	37.54	123.30
18	18.000	457.2	0.375	9.52	70.59	32.02	105.10
	18.000	457.2	0.500	12.70	93.45	42.39	139.20
20	20.000	508.0	0.375	9.52	78.60	35.65	117.02
	20.000	508.0	0.500	12.70	104.13	47.23	155.12
24	24.000	609.6	0.375	9.52	94.62	42.92	140.88
	24.000	609.6	0.500	12.70	125.49	56.92	185.94

## ASTM A252 pipe piles

HUSTEEL

Outside Diameter, in.	Nominal Wall Thickness, in.	Weight per Unit Lengths, lb/ft	Outside Diameter, in.	Nominal Wall Thickness, in.	Weight per Unit Lengths, lb/ft
6	0.134	8.40	12	0.134	17.00
	0.141	8.83		0.141	17.87
	0.156	9.75		0.150	19.00
	0.164	10.23		0.164	20.75
	0.172	10.72		0.172	21.75
8	0.141	11.85	12 3/4	0.179	22.62
	0.172	14.39		0.188	23.74
	8 5/8	0.109		9.92	0.203
0.141		12.79		0.219	27.58
0.172		15.54		0.230	28.94
0.188		16.96		0.250	31.40
0.203		18.28		0.281	35.20
0.219	19.68	0.312		38.98	
0.250	22.38	0.109		14.73	
0.277	24.72	0.134		16.07	
0.312	27.73	0.141		16.91	
0.322	28.58	0.150	18.20		
0.344	30.46	0.164	22.07		
0.375	33.07	0.172	23.13		
0.438	38.33	0.179	26.05		
0.500	43.43	0.188	25.25		
10	0.109	11.53	0.203	27.23	
	0.120	12.67	0.219	29.34	
	0.134	14.13	0.230	30.78	
	0.141	14.86	0.250	33.41	
	0.150	15.79	0.281	37.46	
	0.164	17.24	0.312	41.48	
	0.172	18.07	0.330	43.81	
	0.179	18.79	0.344	45.62	
	0.188	19.72	0.375	48.61	
	0.203	21.26	0.438	57.65	
	0.219	22.90	0.500	65.48	
	0.230	24.02	14	0.134	19.86
	0.250	26.06		0.141	20.89
10 3/4	0.109	12.40		0.150	22.21
	0.120	13.64		0.164	24.26
	0.134	15.21		0.172	25.43
	0.141	15.99		0.179	26.45
	0.150	17.00		0.188	27.76
	0.164	18.56		0.203	29.94
	0.172	19.45		0.219	32.26
	0.179	20.23		0.230	33.84
	0.188	21.23		0.250	36.75
	0.203	22.89	0.281	41.21	
	0.219	24.65	0.312	45.65	
	0.230	25.87	0.344	50.22	
	0.250	28.05	0.375	54.62	
0.279	31.23	0.438	63.50		
0.307	34.27	0.469	67.84		
0.344	38.27	0.500	72.16		
0.365	40.52	16	0.134	22.73	
0.438	48.28		0.141	23.90	
0.500	54.79		0.150	25.42	
			0.164	27.76	

Note 1. 1in=25.4mm 2. 1lb/ft=1.49kg/m 3. 1lb/ft=0.45359kg/m

**HUSTEEL** ASTM A 252

Outside Diameter, in.	Nominal Wall Thickness, in.	Weight per Unit Length, lb/ft	Outside Diameter, in.	Nominal Wall Thickness, in.	Weight per Unit Length, lb/ft	
16	0.172	29.10	20	0.188	39.82	
	0.179	30.27		0.219	46.31	
	0.188	30.81		0.250	52.78	
	0.203	34.28		0.281	59.23	
	0.219	36.95		0.312	65.66	
	0.230	38.71		0.344	72.28	
	0.250	42.09		0.375	78.67	
	0.281	47.22		0.438	91.59	
	0.312	52.32		0.469	97.92	
	0.344	57.57		0.500	104.23	
	0.375	62.64		22	0.172	40.13
	0.438	72.66			0.188	43.84
	0.469	77.67			0.219	50.99
	0.500	82.85			0.250	58.13
18	0.141	26.92	0.281		65.21	
	0.172	32.78	0.312		72.34	
	0.188	35.80	0.375	86.68		
	0.219	41.53	0.438	100.96		
	0.230	43.69	0.469	107.95		
	0.250	47.44	0.500	114.92		
	0.281	53.23	24	0.172	43.81	
	0.312	58.99		0.188	47.86	
	0.344	64.93		0.219	55.67	
	0.375	70.65		0.250	63.47	
0.438	82.23	0.281		71.25		
0.469	87.89	0.312		79.01		
0.500	93.54	0.375	94.71			
20	0.141	29.93	0.438	110.32		
	0.172	36.46	0.469	117.98		
			0.500	125.62		

Note : 1. 1in = 25.4mm    2. 1lb/ft = 1.49kg/m    3. 1lb/ft = 0.45359kg/m

## ASTM A795 Black and Hot dipped Zinc-Coated, Welded Steel Pipe for Fire Protection Use

HUSTEEL

Dimensions, Weights, and Test Pressures For Light-Weight Fire Protection pipe-Schedule 10

NPS Designator	Outside Diameter		Nominal Wall Thickness		Weight Plain End		Test Pressure	
	in.	mm	in.	mm	lb/ft	kg/m	Electric Resistance Weld	
							psi	MPa
3/4	1.050	(26.7)	0.083	(2.11)	0.86	(1.26)	700	(4.83)
1	1.315	(33.4)	0.109	(2.77)	1.41	(2.09)	700	(4.83)
1 1/4	1.650	(42.2)	0.109	(2.77)	1.81	(2.69)	1000	(6.89)
1 1/2	1.900	(48.3)	0.109	(2.77)	2.09	(3.11)	1000	(6.89)
2	2.375	(60.3)	0.109	(2.77)	2.64	(3.93)	1000	(6.89)
2 1/2	2.875	(73.0)	0.120	(3.05)	3.53	(5.26)	1000	(6.89)
3	3.500	(88.9)	0.120	(3.05)	4.34	(6.46)	1000	(6.89)
3 1/2	4.000	(101.6)	0.120	(3.05)	4.98	(7.41)	1200	(8.27)
4	4.500	(114.3)	0.120	(3.05)	5.62	(8.37)	1200	(8.27)
5	5.563	(141.3)	0.136	(3.49)	7.78	(11.59)	1200	(8.27)
6	6.625	(168.3)	0.134	(3.40)	9.30	(13.85)	1000	(6.89)
8	8.625	(219.1)	0.188	(4.78)	16.96	(25.26)	800	(5.51)
10	10.750	(273.1)	0.188	(4.78)	21.23	(31.62)	700	(4.83)

Dimensions, Weights, and Test Pressures For Light-Weight Fire Protection pipe-Schedule 30 and Schedule 40

NPS Designator	Outside Diameter		Nominal Wall Thickness		Weight Plain End		Weight Thread And Couplings		Test Pressure	
	in.	mm	in.	mm	lb/ft	kg/m	lb/ft	kg/m	Electric Resistance Weld	
									psi	MPa
1/2	0.840	(21.3)	0.109	(2.77)	0.85	(1.27)	0.85	(1.27)	700	(4.83)
3/4	1.050	(26.7)	0.113	(2.87)	1.13	(1.69)	1.13	(1.69)	700	(4.83)
1	1.315	(33.4)	0.133	(3.38)	1.68	(2.50)	1.68	(2.50)	700	(4.83)
1 1/4	1.650	(42.2)	0.140	(3.56)	2.27	(3.39)	2.28	(3.40)	1000	(6.89)
1 1/2	1.900	(48.3)	0.145	(3.68)	2.72	(4.05)	2.73	(4.07)	1000	(6.89)
2	2.375	(60.3)	0.154	(3.91)	3.66	(5.45)	3.69	(5.50)	1000	(6.89)
2 1/2	2.875	(73.0)	0.203	(5.16)	5.88	(8.64)	5.83	(8.68)	1000	(6.89)
3	3.500	(88.9)	0.216	(5.49)	7.58	(11.29)	7.62	(11.35)	1000	(6.89)
3 1/2	4.000	(101.6)	0.226	(5.74)	9.12	(13.69)	9.21	(13.71)	1200	(8.27)
4	4.500	(114.3)	0.237	(6.02)	10.80	(16.09)	10.91	(16.25)	1200	(8.27)
5	5.563	(141.3)	0.258	(6.55)	14.63	(21.79)	14.82	(22.07)	1200	(8.27)
6	6.625	(168.3)	0.280	(7.11)	18.99	(28.29)	19.20	(28.60)	1200	(8.27)
8	8.625	(219.1)	0.277*	(7.04)	26.72	(39.82)	25.57	(38.09)	1200	(8.27)
10	10.750	(273.1)	0.307*	(7.80)	34.27	(51.05)	35.78	(53.29)	1000	(6.89)

Note : 1. 1Psi = 0.03031kg/cm<sup>2</sup> 2. lb/ft = 0.45359kg/ft

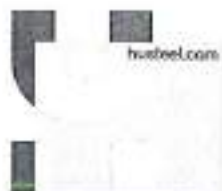
Tube	Nominal Size		Outside Diameter				Wall Thickness		Mass of Black Tube					
			Max.		Min.				Plain End			Screwed and Socketed		
	-	DN	in	mm	in	mm	in	mm	lb/ft	kg/m	kg/m	lb/ft	kg/m	kg/ft
Light	1/2	15	0.841	21.4	0.825	21.0	0.080	2.0	0.636	0.269	0.947	0.646	0.230	0.956
	3/4	20	1.059	26.9	1.041	26.4	0.080	2.3	0.927	0.421	1.38	0.954	0.433	1.39
	1	25	1.328	33.8	1.309	33.2	0.104	2.6	1.33	0.604	1.98	1.36	0.617	2.00
	1 1/4	32	1.670	42.5	1.650	41.9	0.104	2.6	1.71	0.774	2.54	1.75	0.794	2.57
	1 1/2	40	1.903	48.4	1.882	47.6	0.116	2.9	2.17	0.985	3.23	2.22	1.01	3.27
	2	50	2.370	60.2	2.347	59.6	0.116	2.9	2.74	1.24	4.00	2.81	1.27	4.15
	2 1/2	65	2.991	76.0	2.960	75.2	0.128	3.2	3.84	1.74	5.71	3.98	1.81	5.83
	3	80	3.491	89.7	3.450	87.9	0.128	3.2	4.52	2.05	6.72	4.49	2.13	6.89
Medium	1/2	15	0.866	21.7	0.831	21.1	0.104	2.6	0.813	0.369	1.21	0.828	0.376	1.22
	3/4	20	1.072	27.2	1.047	26.6	0.104	2.6	1.05	0.475	1.56	1.07	0.485	1.57
	1	25	1.346	34.2	1.316	33.4	0.126	3.2	1.62	0.735	2.41	1.65	0.748	2.43
	1 1/4	32	1.687	42.9	1.657	42.1	0.126	3.2	2.08	0.945	3.10	2.13	0.966	3.13
	1 1/2	40	1.919	48.8	1.889	48.0	0.126	3.2	2.40	1.09	3.57	2.46	1.12	3.61
	2	50	2.394	60.6	2.354	59.8	0.142	3.6	3.38	1.53	5.03	3.47	1.57	5.10
	2 1/2	65	3.014	76.6	2.969	75.4	0.142	3.6	4.32	1.95	6.43	4.46	2.02	6.55
	3	80	3.524	89.5	3.469	88.1	0.157	4.0	5.62	2.55	8.37	5.80	2.63	8.54
	4	100	4.524	114.9	4.459	113.3	0.177	4.5	8.20	3.72	12.2	8.34	3.78	12.5
	5	125	5.534	140.6	5.459	138.7	0.195	5.0	11.15	5.06	16.6	11.2	5.08	17.1
Heavy	1/2	15	0.856	21.7	0.831	21.1	0.126	3.2	0.968	0.439	1.44	0.983	0.446	1.45
	3/4	20	1.072	27.2	1.047	26.6	0.126	3.2	1.26	0.570	1.87	1.28	0.581	1.88
	1	25	1.346	34.2	1.316	33.4	0.157	4.0	1.98	0.895	2.94	2.01	0.912	2.96
	1 1/4	32	1.687	42.9	1.657	42.1	0.157	4.0	2.55	1.16	3.80	2.60	1.18	3.83
	1 1/2	40	1.919	48.8	1.889	48.0	0.157	4.0	2.94	1.34	4.38	3.01	1.37	4.42
	2	50	2.394	60.6	2.354	59.8	0.177	4.5	4.16	1.89	6.19	4.10	1.90	6.26
	2 1/2	65	3.014	76.6	2.969	75.4	0.177	4.5	5.33	2.42	7.93	5.39	2.44	8.05
	3	80	3.524	89.5	3.469	88.1	0.195	5.0	6.92	3.14	10.3	6.87	3.12	10.5
	4	100	4.524	114.9	4.459	113.3	0.212	5.4	9.74	4.42	14.5	9.91	4.50	14.8
	5	125	5.534	140.6	5.459	138.7	0.212	5.4	12.3	5.46	17.9	12.3	5.58	18.4
	6	150	6.539	166.1	6.459	164.1	0.212	5.4	14.31	6.49	21.3	14.7	6.67	21.9

## ANSI C80.1 Rigid Steel Conduit, Zinc Coated

Nominal Size	Nominal Inside Diameter		Outside Diameter		Nominal Wall Thickness		Length Without Coupling		Minimum weight of Ten Unit Lengths with Couplings Attached	
	in.	mm	in.	mm	in.	mm	ft & in	m	lb	kg
1/2	0.632	16.1	0.840	21.3	0.104	2.64	9' 11 1/4"	3.03	79.0	35.83
3/4	0.836	21.2	1.050	26.7	0.107	2.72	9' 11 1/4"	3.03	105.0	47.63
1	1.063	27.0	1.315	33.4	0.126	3.20	9' 11"	3.02	153.0	69.40
1 1/4	1.394	35.4	1.660	42.2	0.133	3.38	9' 11"	3.02	201.0	91.17
1 1/2	1.624	41.2	1.900	48.3	0.138	3.51	9' 11"	3.02	249.0	112.55
2	2.083	52.9	2.375	60.3	0.148	3.71	9' 11"	3.02	332.0	150.60
2 1/2	2.480	63.2	2.875	73.0	0.193	4.90	9' 10 1/2"	3.01	527.0	239.05
3	3.090	78.5	3.500	88.9	0.205	5.21	9' 10 1/2"	3.01	682.6	309.63
3 1/2	3.570	90.7	4.000	101.6	0.215	5.46	9' 10 1/4"	3.00	831.0	376.94
4	4.050	102.9	4.500	114.3	0.225	5.72	9' 10 1/4"	3.00	972.3	441.04
5	5.073	128.9	5.563	141.3	0.245	6.22	9' 10"	3.00	1313.6	595.85
6	6.093	154.8	6.625	168.3	0.266	6.76	9' 10"	3.00	1745.3	791.67

### UL6 Rigid Metal Conduit

Nominal Size	Nominal Inside Diameter		Outside Diameter		Nominal Wall Thickness		Length Without Coupling		Minimum acceptable weight of ten lengths of finished conduit with one coupling attached to each length	
	in.	mm	in.	mm	in.	mm	ft & in	m	lb	kg
1/2	0.632	16.05	0.840	21.34	0.104	2.64	9' 11 1/4"	3.030	79.0	35.83
3/4	0.836	21.23	1.050	26.67	0.107	2.72	9' 11 1/4"	3.030	105.0	47.63
1	1.063	27.00	1.315	33.40	0.126	3.20	9' 11"	3.025	153.0	69.40
1 1/4	1.394	35.41	1.650	42.16	0.133	3.38	9' 11"	3.025	201.0	91.17
1 1/2	1.624	41.25	1.900	48.26	0.138	3.51	9' 11"	3.025	249.0	112.55
2	2.083	52.91	2.375	60.33	0.146	3.71	9' 11"	3.025	332.0	150.59
2 1/2	2.489	63.22	2.875	73.03	0.193	4.90	9' 10 1/2"	3.010	527.0	239.04
3	3.090	78.49	3.500	88.90	0.205	5.21	9' 10 1/2"	3.010	682.6	309.62
3 1/2	3.570	90.68	4.000	101.60	0.215	5.46	9' 10 1/4"	3.005	831.0	376.94
4	4.050	102.87	4.500	114.30	0.225	5.72	9' 10 1/4"	3.005	972.3	441.03
5	5.073	128.85	5.563	141.30	0.245	6.22	9' 10"	2.995	1313.6	595.84
6	6.093	154.76	6.625	168.28	0.266	6.76	9' 10"	2.995	1745.3	791.66



## HUSTEEL KS D 3507(JIS G 3452) Carbon Steel Pipes for Ordinary Piping

Nominal Size		Outside Diameter mm	Tolerance of Outside Diameter		Wall Thickness mm	Tolerance of Thickness	Unit Weight of Plain Ends kg/m
A	B		Threaded	Plain Ends			
15	1/2	21.7	±0.5mm		2.65(2.8)	+ Not specified	1.25(1.31)
20	3/4	27.2	±0.5mm		2.65(2.8)		1.60(1.66)
25	1	34.0	±0.5mm		3.25(3.2)		2.45(2.43)
32	1 1/4	42.7	±0.5mm		3.25(3.5)		3.16(3.38)
40	1 1/2	48.6	±0.5mm		3.25(3.5)		3.63(3.69)
50	2	60.5	±0.5mm	±1%	3.65(3.8)	-12.5%	5.12(5.31)
65	2 1/2	76.3	±0.7mm	±1%	3.65(4.2)		6.54(7.47)
80	3	89.1	±0.8mm	±1%	4.05(4.2)		8.49(8.79)
90	3 1/2	101.6	±0.8mm	±1%	4.05(4.2)		9.74(10.1)
100	4	114.3	±0.8mm	±1%	4.52(4.5)		12.2(12.2)
125	5	139.8	±0.8mm	±1%	4.85(4.5)		16.1(15.0)
150	6	165.2	±0.8mm	±1%	4.85(5.0)		19.2(19.8)
200	8	216.3	±1.0mm	±1%	5.85(5.8)		30.4(30.1)
250	10	267.4	±1.3mm	±1%	6.42(6.6)		41.2(42.4)
300	12	318.5	±1.5mm	±1%	7.02(6.9)		53.8(53.0)
350	14	355.6	-	±1%	7.60	65.2	
400	16	406.4	-	±1%	7.9	77.6	
450	18	457.2	-	±1%	7.9	83.5	
500	20	508.8	-	±1%	7.9	93.4	
550	22	558.8	-	±1%	7.9	107.3	
600	24	609.6	-	±1%	7.9	117.2	



## KS D 3562(JIS G 3454) Carbon Steel Pipes for Pressure Service

Nominal Size		Outside Diameter	Nominal Wall Thickness																		
			Schedule10			Schedule20			Schedule30			Schedule40			Schedule60			Schedule80			
			Wall-thickness	Weight	Hydrostatic Test Pressure (kgf/cm <sup>2</sup> )	Wall-thickness	Weight	Hydrostatic Test Pressure (kgf/cm <sup>2</sup> )	Wall-thickness	Weight	Hydrostatic Test Pressure (kgf/cm <sup>2</sup> )	Wall-thickness	Weight	Hydrostatic Test Pressure (kgf/cm <sup>2</sup> )	Wall-thickness	Weight	Hydrostatic Test Pressure (kgf/cm <sup>2</sup> )	Wall-thickness	Weight	Hydrostatic Test Pressure (kgf/cm <sup>2</sup> )	
A	B	mm	mm	kg/m	kgf/cm <sup>2</sup>	mm	kg/m	kgf/cm <sup>2</sup>	mm	kg/m	kgf/cm <sup>2</sup>	mm	kg/m	kgf/cm <sup>2</sup>	mm	kg/m	kgf/cm <sup>2</sup>	mm	kg/m	kgf/cm <sup>2</sup>	
15	1/2	21.7											2.8	1.31	60	3.2	1.46	90	3.7	1.64	120
20	3/4	27.2											2.9	1.74	60	3.4	2.00	90	3.9	2.24	120
25	1	34.0											3.4	2.57	60	3.9	2.69	90	4.5	3.27	120
32	1 1/4	42.7											3.6	3.47	60	4.5	4.24	90	4.9	4.57	120
40	1 1/2	48.6											3.7	4.10	60	4.5	4.89	90	5.1	5.07	120
50	2	60.5				3.2	4.52	35					3.9	5.44	60	4.9	6.72	90	5.5	7.40	120
65	2 1/2	76.3				4.5	7.97	25					5.2	9.12	60	6.0	10.4	90	7.0	12.0	120
80	3	89.1				4.5	9.39	25					5.5	11.3	60	6.6	13.4	90	7.6	15.3	120
90	3 1/2	101.6				4.5	10.8	34					5.7	13.5	60	7.0	16.3	90	8.1	18.7	120
100	4	114.3				4.9	13.2	35					6.0	16.0	60	7.1	18.8	90	8.6	22.4	120
125	5	139.8				5.1	16.9	35					6.6	21.7	60	8.1	26.3	90	9.5	30.5	120
150	6	165.2				5.5	21.7	35					7.1	27.7	60	9.3	35.8	90	11.0	41.8	120
200	8	216.3				6.4	33.1	35	7.0	36.1	50		8.2	42.1	60	10.3	52.3	90	12.7	63.8	120
250	10	267.4				6.4	41.2	35	7.9	49.9	50		9.3	59.2	60	12.7	79.8	90	15.1	99.9	120
300	12	318.5				6.4	49.3	35	8.4	64.2	50		10.3	78.3	60	14.3	107	90	17.4	129	120
350	14	355.6	6.4	55.1	20	7.9	67.7	35	9.5	81.1	50		11.1	94.3	60	15.1	127	90	19.0	158	120
400	16	406.4	6.4	63.1	20	7.9	77.6	35	9.5	93.0	50		12.7	123	60	16.7	160	90	21.4	203	120
450	18	457.2	6.4	71.1	20	7.9	87.5	35	11.1	122	50		14.3	156	60	19.0	205	90	-	-	-
500	20	508.0	6.4	79.2	20	9.5	117	35	12.7	155	50		15.1	184	60	20.6	248	90	-	-	-
550	22	558.8	6.4	87.2	20	9.5	129	35	12.7	171	50		15.9	213	60	-	-	-	-	-	-
600	24	609.6	6.4	95.2	20	9.5	141	35	14.3	228	50		-	-	-	-	-	-	-	-	-

Note : Tolerance of Dimensions 1) Tolerance of Outside Dia. : 25A or Under  $\pm 0.3\text{mm}$ , 32A or larger,  $\pm 0.6\%$   
 2) Tolerance of Wall Thickness : 3mm Under  $\pm 0.3\text{mm}$ , 3mm or thicker,  $\pm 10\%$

## KSD 3631 Carbon Steel Pipes for Fuel Gas Piping

Nominal Size		Outside Diameter	Tolerance of Outside Diameter	Wall Thickness	Tolerance of Wall Thickness	Weight
A	B	mm		mm		kg/m
15	1/2	21.7	±0.5mm	2.65	+ Not specified -12.5%	1.25
20	3/4	27.2	±0.5mm	2.65		1.60
25	1	34.0	±0.5mm	2.65		2.45
32	1 1/4	42.7	±0.5mm	3.25		3.16
40	1 1/2	48.6	±0.5mm	3.25		3.63
50	2	60.5	±1%	3.65		5.12
65	2 1/2	76.3	±1%	3.65		6.54
80	3	89.1	±1%	4.05		8.49
90	3 1/2	101.6	±1%	4.05		9.74
100	4	114.3	±1%	4.5		12.2
125	5	139.8	±1%	4.85		16.1
150	6	165.2	±1%	4.85		19.2
200	8	216.3	±1%	5.85		30.4
250	10	267.4	±1%	6.40		41.2
300	12	318.5	±1%	7.0		53.8
350	14	355.6	±1%	7.60		65.2
400	16	406.4	±1%	7.9		77.6
450	18	457.2	±1%	7.9		87.5
500	20	508.0	±1%	7.9		97.4
550	22	558.8	±1%	7.9		107.3
600	24	609.6	±1%	7.9	117.2	

## KS C 8401 (JIS C 8305) Rigid Steel Conduit

Nominal Size	Outside Diameter	Tolerance of Outside Diameter	Nominal Wall Thickness	Weight	Effective Length of Thread Part(mm)	
					Max	Min
G 16	21.0	±0.3	2.3	1.06	19	16
G 22	26.5	±0.3	2.3	1.37	22	19
G 28	33.3	±0.3	2.5	1.90	25	22
G 36	41.9	±0.3	2.5	2.43	28	25
G 42	47.8	±0.3	2.5	2.79	28	25
G 54	59.6	±0.3	2.8	3.92	32	28
G 70	75.2	±0.3	2.8	5.00	36	32
G 82	87.9	±0.3	2.8	5.88	40	36
G 92	100.7	±0.4	3.5	8.39	42	36
G 104	113.4	±0.4	3.5	9.48	45	39

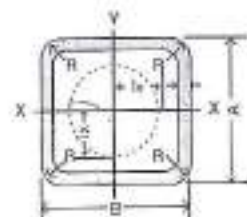
# KS D 3563(JIS G 3461) Carbon Steel Boiler and Heat and Heat Exchanger Tubes

Outside Diameter(mm)	Wall Thickness(mm)	1.2	1.6	2.0	2.3	2.6	2.9	3.2	3.5	4.0	4.5	5.0	5.5	6.0	6.5	7.0
	15.9	0.435	0.561	0.686	0.771	0.853	0.90									
19.0	0.527	0.687	0.838	0.947	1.05	1.15										
21.7	0.607	0.793	0.972	1.10	1.22	1.34	1.46									
25.4	0.716	0.939	1.15	1.31	1.46	1.61	1.75	1.89								
27.2	0.769	1.01	1.24	1.41	1.58	1.74	1.89	2.05	2.29							
31.8	0.906	1.19	1.47	1.67	1.87	2.07	2.25	2.44	2.74	3.03						
34.0		1.28	1.58	1.80	2.01	2.22	2.43	2.63	2.96	3.27	3.58					
38.1		1.44	1.78	2.03	2.28	2.52	2.75	2.99	3.36	3.73	4.08	4.42				
42.7			2.01	2.29	2.57	2.85	3.12	3.38	3.82	4.24	4.65	5.05	5.43			
45.0			2.12	2.42	2.72	3.01	3.30	3.58	4.04	4.49	4.93	5.36	5.77	6.17		
48.6			2.30	2.63	2.95	3.27	3.58	3.89	4.40	4.89	5.38	5.85	6.30	6.75	7.18	
50.8			2.41	2.75	3.09	3.43	3.76	4.08	4.62	5.14	5.65	6.14	6.63	7.10	7.56	
54.0			2.56	2.93	3.30	3.65	4.01	4.36	4.93	5.48	6.04	6.58	7.10	7.61	8.11	
57.1			2.72	3.11	3.49	3.88	4.25	4.63	5.24	5.84	6.42	7.00	7.56	8.11	8.65	
60.3			2.88	3.29	3.70	4.10	4.51	4.90	5.55	6.19	6.82	7.43	8.03	8.62	9.20	
63.5			3.47	3.90	4.33	4.76	5.18	5.87	6.55	7.21	7.87	8.51	9.14	9.75		
65.0			3.56	4.00	4.44	4.88	5.31	6.02	6.71	7.40	8.07	8.73	9.38	10.0		
70.0			3.84	4.32	4.80	5.27	5.74	6.51	7.27	8.01	8.75	9.47	10.2	10.9		
76.2			4.19	4.72	5.24	5.76	6.27	7.12	7.96	8.78	9.59	10.4	11.2	11.9		
82.6							6.27	6.83	7.75	8.67	9.57	10.5	11.3	12.2	13.1	
88.9							6.76	7.37	8.37	9.37	10.3	11.3	12.3	13.2	14.1	
101.6							8.47	9.63	10.8	11.9	13.0	14.1	15.2	16.3		
114.3								10.9	12.2	13.5	14.8	16.0	17.3	18.5		
127.0								12.1	13.6	15.0	16.5	17.9	19.3	20.7		
139.6											18.2	19.8	21.4	22.9		

## Carbon Steel Tubes for General Structural Purposes

Outside Diameter	Wall Thickness	Cross Sectional Area	Weight	Moment of Inertia	Modulus of Section	Radius of Gyration
mm	mm	cm <sup>2</sup>	kg/m	cm <sup>4</sup>	cm <sup>3</sup>	cm
21.7	2.0	1.238	0.972	0.607	0.560	0.100
27.2	2.0	1.583	1.24	1.26	0.930	0.890
	2.3	1.799	1.41	1.41	1.03	0.880
34.0	2.3	2.291	1.80	2.89	1.70	1.12
42.7	2.3	2.919	2.29	5.97	2.80	1.43
	2.5	3.157	2.48	6.40	3.00	1.42
49.6	2.3	3.346	2.63	8.59	3.70	1.64
	2.5	3.621	2.84	9.65	3.97	1.63
	2.8	4.029	3.16	10.6	4.36	1.62
	3.2	4.564	3.58	11.8	4.86	1.61
60.5	2.3	4.205	3.30	17.8	5.90	2.06
	3.2	5.760	4.52	23.7	7.84	2.03
	4.0	7.100	5.57	28.5	9.41	2.00
76.3	2.8	6.465	5.08	43.7	11.5	2.60
	3.2	7.349	5.77	49.2	12.9	2.59
	4.0	9.085	7.13	59.5	15.6	2.58
89.1	2.8	7.591	5.96	70.7	15.9	3.05
	3.2	8.636	6.78	79.8	17.9	3.04
101.6	3.2	9.892	7.76	120	23.6	3.48
	4.0	12.26	9.63	146	28.8	3.45
	5.0	15.11	11.9	177	34.9	3.42
114.3	3.2	11.17	8.77	172	30.2	3.93
	3.5	12.18	9.58	187	32.7	3.92
	4.5	15.52	12.2	234	41.0	3.89
139.8	3.6	15.40	12.1	357	51.1	4.82
	4.0	17.07	13.4	394	56.3	4.80
	4.5	19.13	15.0	439	62.7	4.79
	6.0	25.22	19.8	566	80.9	4.74
165.2	4.5	22.72	17.8	734	88.9	5.68
	5.0	25.16	19.8	808	97.8	5.67
	6.0	30.01	23.6	952	115	5.63
	7.1	35.26	27.7	110 × 10	134	5.60
	4.5	26.32	20.7	114 × 10	120	6.59
190.7	5.3	30.87	24.2	133 × 10	139	6.56
	6.0	34.82	27.3	149 × 10	156	6.53
	7.0	40.40	31.7	171 × 10	179	6.50
	8.2	47.01	36.9	196 × 10	206	6.46
236.3	4.5	29.94	23.5	168 × 10	155	7.09
	5.8	38.36	30.1	213 × 10	197	7.45
	6.0	39.64	31.1	219 × 10	203	7.44
	7.0	46.03	36.1	252 × 10	233	7.40
	8.0	52.35	41.1	284 × 10	263	7.37
267.4	8.2	53.61	42.1	291 × 10	269	7.35
	6.0	49.27	38.7	421 × 10	315	9.24
	6.6	54.08	42.4	460 × 10	344	9.22
	7.0	57.26	45.0	486 × 10	363	9.21
	8.0	65.19	51.2	549 × 10	411	9.18
	9.0	73.06	57.3	611 × 10	457	9.14
318.5	9.3	75.41	59.2	629 × 10	470	9.13
	6.0	58.91	46.2	719 × 10	462	11.1
	6.9	67.55	53.0	820 × 10	515	11.0
	8.0	78.04	61.3	941 × 10	591	11.0
	9.0	87.51	68.7	105 × 10 <sup>1</sup>	659	10.9
355.6	10.3	99.73	78.3	119 × 10 <sup>1</sup>	744	10.9
	6.4	70.21	55.1	107 × 10 <sup>1</sup>	602	12.3
	7.9	86.29	67.7	130 × 10 <sup>1</sup>	734	12.3
	9.0	98.00	76.9	147 × 10 <sup>1</sup>	828	12.3
	9.5	103.3	81.1	155 × 10 <sup>1</sup>	871	12.2
	12.0	129.5	102	191 × 10 <sup>1</sup>	108 × 10	12.2
406.4	12.7	136.8	107	201 × 10 <sup>1</sup>	113 × 10	12.1
	7.9	98.90	77.6	196 × 10 <sup>1</sup>	967	14.1
	9.0	112.4	88.2	222 × 10 <sup>1</sup>	109 × 10	14.1
	9.5	118.5	93.0	233 × 10 <sup>1</sup>	115 × 10	14.0
	12.0 <sup>1</sup>	148.7	117	289 × 10 <sup>1</sup>	142 × 10	14.0
	12.7	157.1	123	305 × 10 <sup>1</sup>	150 × 10	13.9
406.4	16.0	196.2	154	374 × 10 <sup>1</sup>	184 × 10	13.8
	19.0	231.2	182	435 × 10 <sup>1</sup>	214 × 10	13.7

Outside Diameter	Wall Thickness	Cross Sectional Area	Weight	Moment of Inertia	Modulus of Section	Radius of Gyration
mm	mm	cm <sup>2</sup>	kg/m	cm <sup>4</sup>	cm <sup>3</sup>	cm
457.2	9.0	126.7	99.5	$318 \times 10^3$	$140 \times 10$	15.8
	9.5	133.6	105	$335 \times 10^3$	$147 \times 10$	15.8
	12.0	167.8	132	$416 \times 10^3$	$182 \times 10$	15.7
	12.7	177.3	139	$438 \times 10^3$	$192 \times 10$	15.7
	16.0	221.8	174	$540 \times 10^3$	$236 \times 10$	15.6
	19.0	261.6	205	$629 \times 10^3$	$275 \times 10$	15.5
500	9.0	138.8	109	$416 \times 10^3$	$167 \times 10$	17.4
	12.0	184.0	144	$548 \times 10^3$	$219 \times 10$	17.3
	14.0	213.8	168	$632 \times 10^3$	$253 \times 10$	17.2
508.0	7.9	124.1	97.4	$388 \times 10^3$	$153 \times 10$	17.7
	9.0	141.1	111	$439 \times 10^3$	$173 \times 10$	17.6
	9.5	148.8	117	$462 \times 10^3$	$182 \times 10$	17.6
	12.0	187.0	147	$575 \times 10^3$	$227 \times 10$	17.5
	12.7	197.6	155	$606 \times 10^3$	$239 \times 10$	17.5
	14.0	217.3	171	$663 \times 10^3$	$261 \times 10$	17.5
	16.0	247.3	194	$749 \times 10^3$	$295 \times 10$	17.4
	19.0	291.9	229	$874 \times 10^3$	$344 \times 10$	17.3
	22.0	335.9	264	$994 \times 10^3$	$391 \times 10$	17.2
508.8	9.0	155.5	122	$588 \times 10^3$	$210 \times 10$	19.4
	12.0	206.1	162	$771 \times 10^3$	$276 \times 10$	19.3
	16.0	272.8	214	$101 \times 10^3$	$380 \times 10$	19.2
	19.0	322.8	253	$118 \times 10^3$	$421 \times 10$	19.1
	22.0	371.0	291	$134 \times 10^3$	$479 \times 10$	19.0
600	9.0	167.1	131	$730 \times 10^3$	$243 \times 10$	20.9
	12.0	221.1	174	$958 \times 10^3$	$320 \times 10$	20.8
	14.0	257.7	202	$111 \times 10^3$	$369 \times 10$	20.7
	16.0	293.6	230	$125 \times 10^3$	$418 \times 10$	20.7
609.6	9.0	169.8	133	$766 \times 10^3$	$251 \times 10$	21.2
	9.5	179.1	141	$806 \times 10^3$	$265 \times 10$	21.2
	12.0	225.3	177	$101 \times 10^3$	$330 \times 10$	21.1
	12.7	238.2	187	$106 \times 10^3$	$348 \times 10$	21.1
	14.0	262.0	206	$116 \times 10^3$	$381 \times 10$	21.1
	16.0	298.4	234	$132 \times 10^3$	$431 \times 10$	21.0
	19.0	352.5	277	$154 \times 10^3$	$505 \times 10$	20.9
	22.0	406.1	319	$176 \times 10^3$	$576 \times 10$	20.8

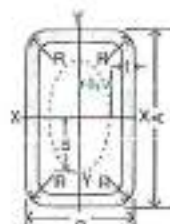


## Square Pipes

Nominal Size (mm)	Wall Thickness (mm)	Weight (kg/m)	Sectional Area(cm <sup>2</sup> )	Moment of Inertia(cm <sup>4</sup> )	Modulus of Section(cm <sup>3</sup> )	Radius of Gyration(cm)
				I <sub>x</sub> , I <sub>y</sub>	Z <sub>x</sub> , Z <sub>y</sub>	I <sub>x</sub> , I <sub>y</sub>
20×20	1.2	0.697	0.865	0.53	0.52	0.760
	1.6	0.872	1.123	0.67	0.65	0.751
25×25	1.2	0.867	1.105	1.03	0.824	0.965
	1.6	1.12	1.432	1.27	1.02	0.942
30×30	1.2	1.06	1.345	1.63	1.22	1.17
	1.6	1.38	1.752	2.31	1.54	1.15
40×40	1.6	1.88	2.392	5.79	2.90	1.56
	2.3	2.62	3.332	7.73	3.86	1.52
50×50	1.6	2.38	3.032	11.7	4.88	1.96
	2.3	3.34	4.252	15.9	6.34	1.93
	3.2	4.50	5.727	20.4	8.16	1.89
60×60	1.6	2.88	3.672	20.7	6.89	2.37
	2.3	4.06	5.172	28.3	9.44	2.34
	3.2	5.50	7.007	36.9	12.3	2.30
75×75	1.6	3.64	4.632	41.3	11.0	2.99
	2.3	5.14	6.592	57.1	15.2	2.95
	3.2	7.01	8.927	75.5	20.1	2.91
	4.5	9.55	12.17	98.6	26.3	2.85
80×80	2.3	5.50	7.012	69.9	17.5	3.16
	3.2	7.51	9.567	92.7	23.2	3.11
	4.5	10.3	13.07	122	30.4	3.05
90×90	2.3	6.23	7.932	101	22.4	3.56
	3.2	8.51	10.85	135	29.9	3.52
100×100	2.3	6.95	8.852	140	27.9	3.97
	3.2	9.52	12.13	187	37.5	3.93
	4.0	11.7	14.95	226	45.3	3.89
	4.5	13.1	16.67	249	49.9	3.87
	6.0	17.0	21.63	311	62.3	3.79
	9.0	24.1	30.67	408	81.6	3.65
	12.0	30.2	38.53	471	94.3	3.50
125×125	3.2	12.0	15.23	376	60.1	4.95
	4.5	16.6	21.17	506	80.9	4.89
	5.0	18.3	23.36	553	88.4	4.86
	6.1	21.7	27.63	641	103	4.82
	9.0	31.1	38.67	865	138	4.67
	12.0	39.7	50.53	103×10	165	4.52

**Square Pipes**

Nominal Size (mm)	Wall Thickness (mm)	Weight (kg/m)	Sectional Area (cm <sup>2</sup> )	Moment of inertia (cm <sup>4</sup> )	Modulus of Section (cm <sup>3</sup> )	Radius of Gyration (cm)
				I <sub>x</sub> , I <sub>y</sub>	Z <sub>x</sub> , Z <sub>y</sub>	I <sub>x</sub> , I <sub>y</sub>
150 × 150	4.5	20.1	25.67	896	120	5.91
	5.0	22.3	28.36	982	131	5.89
	6.0	26.4	33.63	115 × 10	153	5.84
	9.0	38.2	48.67	159 × 10	210	5.69
175 × 175	4.5	23.7	30.17	145 × 10	166	6.93
	5.0	26.2	33.36	159 × 10	182	6.91
	6.0	31.1	39.63	186 × 10	213	6.86
200 × 200	4.5	27.2	34.67	219 × 10	219	7.95
	5.0	35.8	45.63	283 × 10	283	7.88
	6.0	46.9	59.79	362 × 10	362	7.78
	9.0	52.3	66.67	399 × 10	399	7.73
	12.0	67.9	86.53	498 × 10	498	7.59
250 × 250	5.0	38.0	48.36	481 × 10	384	9.97
	6.0	45.2	57.63	567 × 10	454	9.92
	8.0	59.5	75.79	732 × 10	585	9.82
	9.0	66.5	84.67	809 × 10	647	9.78
	12.0	86.8	110.5	109 × 10 <sup>2</sup>	820	9.63
300 × 300	4.5	41.3	52.67	763 × 10	508	12.0
	6.0	54.7	69.63	995 × 10	664	12.0
	9.0	80.6	102.7	143 × 10 <sup>2</sup>	956	11.8
	12.0	106	134.5	183 × 10 <sup>2</sup>	122 × 10	11.7
350 × 350	9.0	94.7	120.7	232 × 10 <sup>2</sup>	132 × 10	13.9
	12.0	124	158.5	298 × 10 <sup>2</sup>	170 × 10	13.7
400 × 400	9.0	109	138.7	35,063	1,753	15.90
	12.0	143	182.5	45,300	2,270	15.80
	14.0	166	211.1	51,780	2,589	15.66
	16.0	188	239.2	57,942	2,897	15.57
	19.0	220	280.3	66,600	3,330	15.4
	22.0	251	320.2	74,700	3,740	15.3
450 × 450	9.0	122	156.7	45,700	2,210	17.9
	12.0	160	205.5	64,200	2,850	17.7
	16.0	209	271.2	81,800	3,640	17.5
	19.0	250	318.3	97,100	4,310	17.5
	22.0	285	354.2	109,000	4,850	17.3
500 × 500	12.0	181	230.5	90,800	12.0	19.8
	16.0	230	303.2	117,000	16.0	19.6
	19.0	280	356.2	136,000	19.0	19.5
	22.0	320	408.2	153,000	22.0	19.4



## Rectangular Pipes

Nominal Size (mm)	Wall Thickness (mm)	Weight (kg/m)	Sectional Area( $cm^2$ )	Moment of inertia( $cm^4$ )		Modulus of Section( $cm^3$ )		Radius of Gyration( $cm$ )	
				$I_x$	$I_y$	$Z_x$	$Z_y$	$i_x$	$i_y$
40 × 20	1.2	1.05	1.345	2.73	0.92	1.30	0.92	1.42	0.83
	1.6	1.38	1.752	3.43	1.15	1.72	1.15	1.40	0.81
50 × 20	1.8	1.63	2.072	6.08	1.42	2.43	1.42	1.71	0.829
	2.3	2.25	2.872	8.00	1.83	3.20	1.83	1.67	0.798
50 × 30	1.6	1.89	2.392	7.96	3.60	3.18	2.40	1.82	1.23
	2.3	2.62	3.332	10.6	4.76	4.25	3.17	1.79	1.20
	3.2	3.49	4.447	13.4	5.93	5.35	3.95	1.74	1.15
60 × 30	1.6	2.13	2.712	12.5	4.25	4.16	2.83	2.15	1.25
	2.3	2.98	3.792	16.8	5.65	5.61	3.76	2.11	1.22
	3.2	3.99	50.87	21.4	7.09	7.15	4.72	2.05	1.18
60 × 40	1.6	2.38	3.032	15.2	8.16	5.07	4.08	2.24	1.64
	2.3	3.34	4.252	20.7	11.0	6.68	5.50	2.20	1.61
	3.2	4.90	5.727	26.6	14.1	8.67	7.03	2.16	1.57
75 × 20	1.6	2.25	2.872	17.6	2.10	4.69	2.10	2.47	0.855
	2.3	3.16	4.022	23.7	2.73	6.39	2.73	2.43	0.824
75 × 45	1.6	2.88	3.672	26.4	12.9	7.56	5.75	2.78	1.89
	2.3	4.06	5.172	38.9	17.6	10.4	7.82	2.74	1.84
	3.2	5.50	7.007	50.8	22.8	13.5	10.1	2.69	1.80
75 × 50	1.6	3.01	3.672	26.4	12.9	7.56	5.75	2.78	1.89
	2.3	4.24	5.172	38.9	17.0	10.4	7.82	2.74	1.84
	3.2	5.75	7.007	50.8	22.8	13.5	10.1	2.69	1.80
100 × 50	1.6	3.64	4.632	61.3	21.1	12.3	8.43	3.64	2.13
	2.3	5.14	6.552	84.8	29.0	17.0	11.6	3.60	2.10
	3.2	7.01	8.927	112	38.0	22.5	15.2	3.55	2.06
	4.5	9.55	12.17	147	48.9	29.3	19.5	3.47	2.00
125 × 75	2.3	6.95	8.852	192	87.5	30.6	23.3	4.65	3.14
	3.2	9.52	12.13	257	117	41.1	31.1	4.60	3.10
	4.0	11.7	14.95	311	141	49.7	37.5	4.56	3.07
150 × 100	3.2	12.0	15.33	488	262	65.1	52.5	5.64	4.14
	4.5	16.6	21.17	658	352	87.7	70.4	5.58	4.08
	6.0	21.7	27.63	835	444	-	88.8	5.50	4.01
	9.0	31.1	39.67	113 × 10	595	-	119	5.33	3.87
200 × 100	4.5	20.1	25.67	133 × 10	455	133	90.9	7.20	4.21
	6.0	26.4	33.63	170 × 10	577	170	115	7.12	4.14
	9.0	38.2	49.67	235 × 10	762	235	156	6.94	4.01
200 × 150	4.5	23.7	30.17	176 × 10	113 × 10	176	151	7.64	6.13
	6.0	31.1	39.63	227 × 10	146 × 10	227	194	7.56	6.06
	9.0	45.3	57.67	317 × 10	202 × 10	317	270	7.41	5.93
250 × 150	6.0	35.8	45.63	389 × 10	177 × 10	311	236	9.23	6.21
	9.0	52.3	66.67	548 × 10	247 × 10	438	300	9.06	6.09
	12.0	67.9	95.53	685 × 10	307 × 10	548	409	8.90	5.95



**KS F 4602(JIS A 5525)  
 STEEL PIPE PILES**

Outside Diameter	Wall Thickness	Cross Sectional Area	Weight	Moment of Inertia	Modulus Section	Radius of Gyration	Superficial area per Meter
mm	mm	cm <sup>2</sup>	kg/m	cm <sup>4</sup>	cm <sup>3</sup>	cm	m <sup>2</sup> /m
500	9	138.8	109	418 × 10 <sup>8</sup>	167 × 10	17.4	1.57
	12	184.0	144	548 × 10 <sup>8</sup>	219 × 10	17.3	1.57
	14	213.8	168	632 × 10 <sup>8</sup>	253 × 10	17.2	1.57
600	9	167.1	131	730 × 10 <sup>8</sup>	243 × 10	20.9	1.89
	12	221.7	174	958 × 10 <sup>8</sup>	319 × 10	20.8	1.89
	14	257.7	202	111 × 10 <sup>9</sup>	369 × 10	20.7	1.89
	16	293.6	230	125 × 10 <sup>9</sup>	467 × 10	20.7	1.89
700	9	195.4	153	117 × 10 <sup>9</sup>	333 × 10	24.4	2.20
	12	259.4	204	154 × 10 <sup>9</sup>	439 × 10	24.3	2.20
	14	301.7	237	178 × 10 <sup>9</sup>	507 × 10	24.3	2.20
	16	343.8	270	201 × 10 <sup>9</sup>	575 × 10	24.2	2.20
406.4	9	112.4	88.2	222 × 10 <sup>8</sup>	109 × 10	14.0	1.28
	10	124.5	97.8	245 × 10 <sup>8</sup>	120 × 10	14.0	1.28
	11	136.6	107.0	267 × 10 <sup>8</sup>	132 × 10	14.0	1.28
	12	148.7	117	289 × 10 <sup>8</sup>	142 × 10	14.0	1.28
508.0	9	141.1	111	439 × 10 <sup>8</sup>	173 × 10	17.6	1.60
	10	156.4	123	485 × 10 <sup>8</sup>	191 × 10	17.6	1.60
	11	171.8	135	531 × 10 <sup>8</sup>	209 × 10	17.6	1.60
	12	187.0	147	575 × 10 <sup>8</sup>	227 × 10	17.5	1.60
	13	202.2	159	620 × 10 <sup>8</sup>	244 × 10	17.5	1.60
	14	217.3	171	663 × 10 <sup>8</sup>	261 × 10	17.5	1.60
609.6	9	169.8	133	766 × 10 <sup>8</sup>	251 × 10	21.2	1.92
	10	186.4	148	847 × 10 <sup>8</sup>	278 × 10	21.2	1.92
	11	206.9	162	927 × 10 <sup>8</sup>	304 × 10	21.2	1.92
	12	225.3	177	101 × 10 <sup>9</sup>	330 × 10	21.1	1.92
	13	243.6	191	108 × 10 <sup>9</sup>	356 × 10	21.1	1.92
	14	262.0	206	116 × 10 <sup>9</sup>	381 × 10	21.1	1.92
	15	280.2	220	124 × 10 <sup>9</sup>	407 × 10	21.0	1.92
	16	298.4	234	132 × 10 <sup>9</sup>	431 × 10	21.0	1.92

Size	Outside Diameter		Wall Thickness		Weight of Plain Ends		
	mm	in.	mm	in.	lb/ft	kg/ft	kg/m
0.840×0.080	21.34	0.840	2.03	0.080	0.649	0.294	0.956
0.854×0.075	21.69	0.854	1.91	0.075	0.624	0.283	0.929
1.050×0.092	26.67	1.050	2.34	0.092	0.941	0.427	1.400
1.315×0.047	33.40	1.315	1.19	0.047	0.636	0.289	0.941
0.055	33.40	1.315	1.40	0.055	0.740	0.336	1.10
0.065	33.40	1.315	1.65	0.065	0.869	0.394	1.23
0.069	33.40	1.315	1.75	0.069	0.918	0.416	1.37
0.072	33.40	1.315	1.83	0.072	0.956	0.434	1.42
0.079	33.40	1.315	2.01	0.079	1.04	0.473	1.55
0.091	33.40	1.315	2.31	0.091	1.19	0.540	1.77
0.094	33.40	1.315	2.39	0.094	1.23	0.556	1.82
0.104	33.40	1.315	2.64	0.104	1.36	0.610	2.00
1.660×0.047	42.16	1.660	1.19	0.047	0.810	0.367	1.29
0.055	42.16	1.660	1.40	0.055	0.943	0.428	1.49
0.065	42.16	1.660	1.65	0.065	1.11	0.502	1.65
0.069	42.16	1.660	1.75	0.069	1.17	0.532	1.74
0.072	42.16	1.660	1.83	0.072	1.22	0.554	1.82
0.079	42.16	1.660	2.01	0.079	1.33	0.605	1.99
0.094	42.16	1.660	2.39	0.094	1.57	0.713	2.34
0.104	42.16	1.660	2.64	0.104	1.73	0.784	2.57
0.116	42.16	1.660	2.95	0.116	1.91	0.868	2.85
1.900×0.055	48.26	1.900	1.40	0.055	1.08	0.492	1.61
0.065	48.26	1.900	1.65	0.065	1.27	0.578	1.90
0.069	48.26	1.900	1.75	0.069	1.35	0.612	2.01
0.072	48.26	1.900	1.83	0.072	1.41	0.638	2.09
0.079	48.26	1.900	2.01	0.079	1.54	0.697	2.29
0.094	48.26	1.900	2.39	0.094	1.81	0.822	2.70
0.104	48.26	1.900	2.64	0.104	1.99	0.905	2.97
0.116	48.26	1.900	2.95	0.116	2.21	1.000	3.29
2.375×0.055	60.33	2.375	1.40	0.055	1.36	0.618	2.03
0.065	60.33	2.375	1.65	0.065	1.60	0.727	2.39
0.069	60.33	2.375	1.75	0.069	1.70	0.771	2.53
0.072	60.33	2.375	1.83	0.072	1.77	0.803	2.64
0.079	60.33	2.375	2.01	0.079	1.94	0.879	2.88
0.094	60.33	2.375	2.39	0.094	2.29	1.04	3.41
0.104	60.33	2.375	2.64	0.104	2.52	1.14	3.75
0.116	60.33	2.375	2.95	0.116	2.80	1.27	4.16
2.875×0.116	73.03	2.875	2.95	0.116	3.42	1.55	5.09
0.128	73.03	2.875	3.25	0.128	3.76	1.70	5.59
3.000×0.083	76.2	3.000	2.11	0.083	2.99	1.17	3.85
0.128	76.2	3.000	3.25	0.128	3.93	1.78	5.84
3.475×0.128	88.27	3.475	3.25	0.128	4.58	2.08	6.81
3.900×0.120	89.90	3.900	3.05	0.120	4.33	1.96	6.44
0.128	89.90	3.900	3.25	0.128	4.61	2.09	6.86
4.000×0.134	101.6	4.000	3.40	0.134	5.53	2.51	8.23
0.145	101.6	4.000	3.68	0.145	5.97	2.71	8.88
0.226	101.6	4.000	5.74	0.226	9.11	4.13	13.56



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