| Standard | Steel grade | chemical composition (%) | | | | | | | | | | | Process performance | | | batch | Mechanics performance | | | | | Size tolerance | | | | | | delivery status | Water pressure | flaw detection |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | C | Mn | Si | Cr | Mo | V | S | P | Cu | Ni | Ti | Flaring | Squash | Bending | | Rm (Mpa | Rel (Mpa | A (%) | Hardness | AKV J | Outer diamet | Allowable | Wall thicknes | Allowable | Length (mm) | Allowable deviation | | | | |
| ASTM A106-95 | 106 A | ≤0.25 | 0.27~0.93 | ≥0.10 | ≤0.40 | ≤0.15 | ≤0.08 | ≤0.035 | ≤0.035 | ≤0.40 | ≤0.40 | / | / | D＞60.3 | D≤60.3 | | ≥330 | ≥205 | ≥35 | | ≤48.3 | ±0.40 | | ≥-12.5% | | Negotiated settlement | | annealing | ET or UT water pressure | ET或UT |
| | 106 B | ≤0.30 | 0.29~1.06 | ≥0.10 | ≤0.40 | ≤0.15 | ≤0.08 | ≤0.035 | ≤0.035 | ≤0.40 | ≤0.40 | / | / | | | | ≥415 | ≥240 | ≥30 | | ＞48.3~114.3 | ±0.79 | | | | | | | | |
| | 106 C | ≤0.35 | 0.29~1.06 | ≥0.10 | ≤0.40 | ≤0.15 | ≤0.08 | ≤0.035 | ≤0.035 | ≤0.40 | ≤0.40 | / | / | | | | ≥485 | ≥275 | ≥30 | | ＞114.3~219.1 | +1.59 | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | ＞219.1~457.2 | +2.38 -0.79 | | | | | | | | |
| ASTM A179-00a | A179 | 0.06~0.18 | 0.27~0.63 | / | / | / | / | ≤0.035 | ≤0.035 | / | / | / | √ | √ | / | | ≥325 | ≥180 | ≥35 | HRB≤72 | | ＜25.4 | ±0.10 | D≤38.1 | +20% -0% | D＜50.8 | +3 -0 | | annealing | ET or UT water pressure | ET或UT |
| | | | | | | | | | | | | | | | | | | | | | | 25.4~38.1 | ±0.15 | | | | | | | | |
| ASTM A192-02 | A192 | 0.06~0.18 | 0.27~0.63 | ≤0.25 | / | / | / | ≤0.035 | ≤0.035 | / | / | / | √ | √ | / | | ≥325 | ≥180 | ≥35 | HRB≤77 （t≥5.1） | | ＞38.1~＜50.8 | ±0.20 | | | | | | annealing | ET or UT water pressure | ET或UT |
| | | | | | | | | | | | | | | | | | | | | HB≤137 （t＜5.1） | | 50.8~＜63.5 | ±0.25 | | | | | | | | |
| ASTM A210-02 | A-1 | ≤0.27 | ≤0.93 | ≥0.10 | / | / | / | ≤0.035 | ≤0.035 | / | / | / | √ | √ | / | | ≥415 | ≥255 | ≥30 | HRB≤79 or HB≤143 | | 63.5~＜76.2 | ±0.30 | | | | | | Normalizing | ET or UT water pressure | ET或UT |
| | | | | | | | | | | | | | | | | | | | | | | 76.2~101.6 | ±0.38 | | | | | | | | |
| | | ≤0.35 | 0.29~1.06 | ≥0.10 | / | / | / | ≤0.035 | ≤0.035 | / | / | / | √ | √ | / | | | | | | | | | D＞38.1 | +22% -0% | D≥50.8 | +5 -0 | | | | |
| ASTM A213-01 | T11 | 0.05~0.15 | 0.30~0.60 | 0.50~1.00 | 0.50~1.00 | 1.00~1.50 | / | ≤0.025 | ≤0.025 | / | / | / | √ | √ | / | | ≥415 | ≥205 | ≥30 | | | | | | | | | | | |
| | T12 | 0.05~0.15 | 0.30~0.61 | ≤0.50 | 0.80~1.25 | 0.44~0.65 | / | ≤0.025 | ≤0.025 | / | / | / | √ | √ | / | | ≥415 | ≥220 | ≥30 | HRB≤85 | | ＞190.5~228.6 | +0.38 -1.14 | | | | | | normalizing + tempering | ET or UT water pressure | ET或UT |
| ASTM A53-99 | 53 A | ≤0.25 | ≤0.95 | / | ≤0.40 | ≤0.15 | ≤0.08 | ≤0.045 | ≤0.05 | ≤0.40 | ≤0.40 | / | / | D＞60.3 | D≤60.3 | | ≥330 | ≥205 | ≥36 | | | ≤48.3 | +0.4 -0.8 | ≥-12.5% | | | | | annealing | ET or UT water pressure | ET或UT |
| | 53 B | ≤0.30 | ≤1.20 | / | ≤0.40 | ≤0.15 | ≤0.08 | ≤0.045 | ≤0.05 | ≤0.40 | ≤0.40 | / | / | D＞60.3 | D≤60.3 | | ≥415 | ≥240 | ≥29 | | | ≥60.3 | ±1% | | | | | | | | |
| ASTM A333-04 | A333 GR.6 | ≤0.30 | 0.29~1.06 | ≥0.10 | / | / | / | ≤0.025 | ≤0.025 | / | / | / | / | √ | √ | | ≥415 | ≥240 | ≥30 | -45 ℃ 10×10×55 | ≥18 | 10.3~48.3 | +0.4 -0.8 | 10.3~73 | +20% -12.5% | | +6 -0 | | Normalizing | ET water pressure | ET |
| | | | | | | | | | | | | | | | | | | | | | | >48.3~114.3 | ±0.8 | 88.9~323 (t/d≤5%) | +22.5% -12.5% | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | >114.3~219 | +1.6 -0.8 | 88.9~323 (t/d>5%) | +22.5% -12.5% | | | | | | |
| DIN17175-79 | St 35.8 | ≤0.17 | 0.40~0.80 | 0.10~0.35 | / | / | / | ≤0.040 | ≤0.040 | / | / | / | √ | √ | / | | 360~480 | ≥235 | ≥25 | | ≥34 | ＞120 | ±0.75% | D≤130 S≤2Sn | +15% -10% | ≤6m | +10 -0 | | Normalizing | ET or UT water pressure | ET或UT |
| | St 45.8 | ≤0.21 | 0.40~1.20 | 0.10~0.35 | / | / | / | ≤0.040 | ≤0.040 | / | / | / | √ | √ | / | | 410~530 | ≥255 | ≥21 | | ≥27 | ≤120 | ±0.60% or ±0.25 Whichever is greater | D≤130 2Sn~4Sn | +12.5% -10% | ＞6~12m | +15 -0 | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | ±9% | D≤130 S>4Sn | | ＞12m | Negotiated settlement | | | | |
| DIN1629-84 | St 37.0 | ≤0.17 | / | / | / | / | / | ≤0.040 | ≤0.040 | / | / | (N≤0.009) | √ | √ | √ | | 350~480 | ≥235 | ≥25 | / | / | | ±1% or ±0.5mm Whichever is greater | D≤130 S≤2Sn | +15% -10% | ≤6000 | +10 -0 | | Normalizing | √ | / |
| | St 44.0 | ≤0.21 | / | / | / | / | / | ≤0.040 | ≤0.040 | / | / | (N≤0.009) | √ | √ | √ | | 420~550 | ≥275 | ≥21 | / | / | | | D≤130 2Sn~4Sn | +12.5% -10% | ＞6~12m | +15 -0 | | Normalizing | | |
| | St 52.0 | ≤0.22 | / | / | / | / | / | ≤0.035 | ≤0.040 | / | / | / | √ | √ | √ | | 500~650 | ≥355 | ≥21 | / | / | | | D≤130 S>4Sn | ±9% | other | Negotiated settlement | | Normalizing | | |

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DIN 2391 | ST 35 | ≤0.17 | ≥0.40 | ≤0.35 | / | / | ≤0.05 | ≤0.025 | ≤0.025 | Nb+Ti+V≤ 0.05% | | ≤0.03 (Nb≤ 0.03) | D≤ 150 S≤9 | √ | / | | 340~ 470 | ≥235 | ≥25 | / | / | -0 | ±10% | ≤500 | +2 -0 | Normalizing | ET or UT water pressure | ET或UT |
| | | | | | | | | | | | | | | | | | ≥315 | ≥160 | ≥25 | | | | | > 500~2000 | +3 -0 | annealing | | |
| | St 45 | ≤0.21 | ≥0.40 | ≤0.35 | / | / | ≤0.05 | ≤0.025 | ≤0.025 | Nb+Ti+V≤ 0.05% | | ≤0.03 (Nb≤ 0.03) | D≤ 150 S≤9 | √ | / | | 440~ 570 | ≥255 | ≥21 | / | / | | | | | Normalizing | | |
| | | | | | | | | | | | | | | | | | ≥390 | ≥195 | ≥21 | | | | | > 2000~5000 | +5 -0 | annealing | | |
| | St 52 | ≤0.22 | ≤1.60 | ≤0.55 | / | / | ≤0.05 | ≤0.025 | ≤0.025 | Nb+Ti+V≤ 0.05% | | ≤0.03 (Nb≤ 0.03) | D≤ 150 S≤9 | √ | / | | 490~ 630 | ≥355 | ≥22 | / | / | | | | | Normalizing | | |
| | | | | | | | | | | | | | | | | | ≥490 | ≥245 | ≥22 | | | | | > 5000~7 | +10 -0 | annealing | | |
| JIS G 3461 | STB 35 | ≤0.18 | 0.30~0.60 | ≤0.35 | / | / | / | ≤0.035 | ≤0.035 | / | / | / | √ | √ | / | | ≥340 | ≥175 | ≥35 | HRB≤77 | / | details as per standards | D<40 S<2 | +0.4 -0 | D≤50 L≤7000 | +0.7 -0 | Normalizing | ET or UT water pressure | ET或UT |
| | STB 42 | ≤0.32 | 0.30~0.60 | ≤0.35 | / | / | / | ≤0.035 | ≤0.035 | / | / | / | √ | √ | / | | ≥410 | ≥255 | ≥25 | HRB≤79 | / | | D<40 S≥2 | +20% -0 | D>50 L≤7000 | +10 -0 | Normalizing | | |
| | STB 52 | ≤0.25 | 1.00~1.50 | ≤0.35 | / | / | / | ≤0.035 | ≤0.035 | / | / | / | √ | √ | / | | ≥510 | ≥295 | ≥25 | HRB≤92 | / | | D≥40 S≥2 | +22% -0 | other | +15 -0 | Normalizing | | |
| EN10255 | S195T | ≤0.20 | ≤1.40 | / | / | / | / | ≤0.030 | ≤0.035 | / | / | / | / | D> 60.3 | 17.2≥ D≤ | | 320~ 520 | ≥195 | ≥20 | | | | ±12.5% | | 6000 or | ±500 | annealing | ET water pressure | ET |
| EN10216-1 | P235 TR2 | ≤0.16 | ≤1.20 | ≤0.35 | ≤0.30 | ≤0.08 | ≤0.02 | ≤0.020 | ≤0.025 | ≤0.30 | ≤0.30 (Al≥ 0.02) | ≤0.04 (Nb≤ 0.01) | / | / | / | | 360~ 500 | ≥235 | ≥25 | -10 ℃ 10×10×55 | ≥28 | ±1% or ±0.5mm Whichever is greater | | | | | Normalizing | ET water pressure | ET |
| GB/T8162-08 | 10 | 0.07~0.13 | 0.35~0.65 | 0.17~0.37 | ≤0.15 | / | / | ≤0.035 | ≤0.035 | ≤0.25 | ≤0.30 | / | × | Z | Y | | ≥335 | ≥205 | ≥24 | | | all ±1% or ±0.3mm Whichever is greater | ≤3 | +15% -10% or ±0.15 whichever is greater | ≤6000 | +10 0 | annealing | / | / |
| | 20 | 0.17~0.23 | 0.35~0.65 | 0.17~0.37 | ≤0.25 | / | / | ≤0.035 | ≤0.035 | ≤0.25 | ≤0.30 | / | × | Z | Y | | ≥390 | ≥245 | ≥20 | | | | | | | | | | |
| | 35 | 0.32~0.39 | 0.50~0.80 | 0.17~0.37 | ≤0.25 | / | / | ≤0.035 | ≤0.035 | ≤0.25 | ≤0.30 | / | × | / | Y | | ≥510 | ≥305 | ≥17 | | | | | | >6000 | +15 0 | | | |
| | 45 | 0.42~0.50 | 0.50~0.80 | 0.17~0.37 | ≤0.25 | / | / | ≤0.035 | ≤0.035 | ≤0.25 | ≤0.30 | / | × | / | Y | | ≥590 | ≥335 | ≥14 | | | | >3 | +12.5% -10% | | | | | |
| | Q345 | ≤0.20 | 1.00~1.60 | ≤0.55 | / | / | / | ≤0.045 | ≤0.045 | / | / | 0.02~0.20 | × | Z | Y | | ≥490 | ≥325 | ≥21 | | | | | | | | | | |
| GB/T8163-08 | 10 | 0.07~0.13 | 0.35~0.65 | 0.17~0.37 | ≤0.15 | / | / | ≤0.035 | ≤0.035 | ≤0.25 | ≤0.30 | / | × | Z | Y | | 335~ 475 | ≥205 | ≥24 | | | all ±1% or ±0.3mm Whichever is greater | ≤3 | +15% -10% or W34 V47±0.15 Whichever is | ≤6000 | +10 0 | annealing | ET or UT water pressure | ET或UT |
| | 20 | 0.17~0.23 | 0.35~0.65 | 0.17~0.37 | ≤0.25 | / | / | ≤0.035 | ≤0.035 | ≤0.25 | ≤0.30 | / | × | Z | Y | | 410~ 530 | ≥245 | ≥20 | | | | | | | | | | |
| | Q295 | ≤0.16 | 0.80~1.50 | ≤0.55 | / | / | / | ≤0.045 | ≤0.045 | / | / | 0.02~0.20 | × | Z | Y | | 390~ 570 | ≥295 | ≥22 | | | | | | >6000 | +15 0 | | | |
| | Q345B | ≤0.20 | 1.00~1.60 | ≤0.55 | / | / | / | ≤0.045 | ≤0.045 | / | / | 0.02~0.20 | × | Z | Y | | 470~ 530 | ≥345 | ≥21 | | | | >3 | +12.5% -10% | | | | | |
| GB3087-99 | 10 | 0.07~0.13 | 0.35~0.65 | 0.17~0.37 | ≤0.15 | / | / | ≤0.035 | ≤0.035 | ≤0.25 | ≤0.30 | / | × | W | Y | | 335~ 475 | ≥195 | ≥24 | | | 10~30 ±0.40 | >1.5~3 | +15% -10% | | | | | |
| | 20 | 0.17~0.23 | 0.35~0.65 | 0.17~0.37 | ≤0.25 | / | / | ≤0.035 | ≤0.035 | ≤0.25 | ≤0.30 | | × | W | Y | | 410~ 550 | ≥245 | ≥20 | | | 30~50 ±0.45 >50 ±1% | >3 | +12.5% -10% | | +20 0 | annealing | ET or UT water pressure | ET或UT |
| GB5310-95 | 20G | 0.17~0.24 | 0.35~0.65 | 0.17~0.37 | ≤0.25 | ≤0.15 | ≤0.08 | ≤0.030 | ≤0.030 | ≤0.20 | ≤0.25 | / | × | V | / | | 410~ 550 | ≥245 | ≥24 | | D≥76mm S≥14mm AKV≥35 | ≤30 ±0.20 | 2~3 | +12% -10% | | | Normalizing | ET water pressure | ET+UT |
| | 12CrMoG | 0.08~0.15 | 0.40~0.70 | 0.17~0.37 | 0.40~0.70 | 0.40~0.55 | / | ≤0.030 | ≤0.030 | ≤0.20 | ≤0.30 | / | × | V | / | | 410~ 560 | ≥205 | ≥21 | | | > 30~50 ±0.30 | | | | | normalizing + tempering | | |
| | 12Cr1MoVG | 0.08~0.15 | 0.40~0.70 | 0.17~0.37 | 0.90~1.20 | 0.25~0.35 | 0.15~0.30 | ≤0.030 | ≤0.030 | ≤0.20 | ≤0.30 | / | × | V | / | | 470~ 640 | ≥255 | ≥21 | | | | >3 | ±10% | | +20 0 | normalizing + tempering | | |
| | 15CrMoG | 0.12~0.18 | 0.40~0.70 | 0.17~0.37 | 0.80~1.10 | 0.40~0.55 | / | ≤0.030 | ≤0.030 | ≤0.20 | ≤0.30 | / | × | V | / | | 440~ 640 | ≥235 | ≥21 | | | >50 ±0.8% | | | | | normalizing + tempering | | |

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| GB6479-2000 | 10 | 0.07~0.14 | 0.35~0.65 | 0.17~0.37 | ≤0.15 | / | / | ≤0.030 | ≤0.030 | ≤0.20 | ≤0.25 | / | × | 22≤D≤400 | / | | 335~490 | ≥205 | ≥24 | (Shock is limited to the following specifications、D≥57mm S≥14mm | – | 14~30 | ±0.20 | ≤3 | +12.5% -10% | | | +20 0 | Normalizing | ET water pressure | ET+UT |
| | 20 | 0.17~0.24 | 0.35~0.65 | 0.17~0.37 | ≤0.25 | / | / | ≤0.030 | ≤0.030 | ≤0.20 | ≤0.25 | / | × | | / | | 410~550 | ≥245 | ≥21 | | AKu≥39 | ＞30~50 | ±0.30 | | | | | | Normalizing | | |
| | 16Mn | 0.12~0.20 | 1.20~1.60 | 0.20~0.60 | ≤0.30 | / | / | ≤0.030 | ≤0.030 | ≤0.20 | ≤0.30 | / | × | | / | | 490~670 | ≥320 | ≥21 | | AKu≥47 | | | ＞3 | ±10% | | | | Normalizing | | |
| | 15CrMo | 0.12~0.18 | 0.40~0.70 | 0.17~0.37 | 0.80~1.10 | 0.40~0.55 | / | ≤0.030 | ≤0.030 | ≤0.20 | ≤0.30 | / | × | | / | | 440~640 | ≥235 | ≥21 | | AKu≥47 | ＞50 | ±0.75% | | | | | | normalizing + tempering | | |
| GB9948-88 | 10 | 0.07~0.14 | 0.35~0.65 | 0.17~0.37 | ≤0.15 | / | / | ≤0.035 | ≤0.035 | ≤0.25 | ≤0.25 | / | D≤159 S≤8 | 22≤D≤400 | / | | 330~490 | ≥205 | ≥24 | ( D≥57mm, S≥14mm should do impact test) | – | ≤30 | ±0.20 | ≤3 | +12% -10% | | | +20 0 | Normalizing | ET or UT water pressure | ET+UT |
| | 20 | 0.17~0.24 | 0.35~0.65 | 0.17~0.37 | ≤0.25 | / | / | ≤0.035 | ≤0.035 | ≤0.25 | ≤0.25 | / | | | / | | 410~550 | ≥245 | ≥21 | | AKu≥39 | ＞30~50 | ±0.30 | | | | | | Normalizing | | |
| | 12CrMo | 0.08~0.15 | 0.40~0.70 | 0.17~0.37 | 0.40~0.70 | 0.40~0.55 | / | ≤0.035 | ≤0.035 | ≤0.25 | ≤0.30 | / | × | | / | | 410~560 | ≥205 | ≥21 | HB≤156 | AKu≥55 | | | | | | | | normalizing + tempering | | |
| | 15CrMo | 0.12~0.18 | 0.40~0.70 | 0.17~0.37 | 0.80~1.10 | 0.40~0.55 | / | ≤0.035 | ≤0.035 | ≤0.25 | ≤0.30 | / | × | | / | | 440~640 | ≥235 | ≥21 | HB≤170 | AKu≥47 | ＞50 | ±0.8% | ＞3 | ±10% | | | | normalizing + tempering | | |

| Standard | Steel grade | chemical composition（%） | | | | | | | | | | | Process performance | | | Steel grade | Mechanics performance | | | | | Size tolerance | | | | | | delivery status | Water pressure | flaw detection |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | C | Mn | Si | Cr | Mo | V | S | P | Cu | Ni | Ti | Flaring | Squash | Bending | | Rm (Mpa | Rel (Mpa | A (%) | Hardness | AKV J | Outer diamet | Allowable | Wall thicknes | Allowable | Length (mm) | Allowable deviation | | | |
| API 5CT | 30Mn2 | 0.27~0.33 | 1.20~1.50 | 0.17~0.37 | ≤0.15 | / | / | ≤0.030 | ≤0.030 | ≤0.25 | ≤0.25 | / | / | / | / | J55 | ≥517 | 379~552 | ≥18 | / | ≥27 | ＜114.3 | ±0.79 | | | | | Normalizing or normalizing + tempering | √ | ET |
| | 37Mn5 | 0.34~0.39 | 1.25~1.50 | 0.20~0.35 | ≤0.15 | / | / | ≤0.030 | ≤0.030 | ≤0.25 | ≤0.25 | / | / | / | / | J55 | ≥517 | 379~552 | ≥18 | / | | | | | | | | | √ | |
| | 30Mn2 37Mn5 | 0.34~0.39 | 1.25~1.50 | 0.20~0.35 | ≤0.15 | / | / | ≤0.030 | ≤0.030 | ≤0.25 | ≤0.25 | / | / | / | / | K55 | ≥655 | 379~552 | ≥14 | / | | | | | | | | | √ | |
| | 33Mn2V | 0.30~0.35 | 1.40~1.70 | 0.20~0.40 | ≤0.15 | / | 0.08~0.15 | ≤0.030 | ≤0.030 | ≤0.25 | ≤0.25 | / | / | / | / | N80-1 | ≥689 | 552~758 | ≥14 | / | ≥40 | ≥114.3 | +1% -0.5% | | | | | Normalizing | √ | |
| | 33Mn2V | ≤0.43 | ≤1.90 | 0.20~0.40 | ≤0.15 | / | 0.08~0.15 | ≤0.030 | ≤0.030 | ≤0.35 | ≤0.25 | / | / | / | / | L80-1 | ≥655 | 552~655 | ≥14 | HRC≤23 | ≥40 | | | | | | | Quenching + tempering | √ | |
| API 5L | PSL 1 | ≤0.21 | ≤0.60 | / | / | / | / | ≤0.030 | ≤0.030 | / | / | / | / | / | D≤60.3 | A25 C L | ≥310 | ≥172 | | / | / | ＜60.3 | +0.41 -0.79 | D≤73.02 | +20% -12.5% | | | normalizing + tempering | √ | ET or UT |
| | | ≤0.22 | ≤0.90 | / | / | / | / | ≤0.030 | ≤0.030 | / | / | / | / | / | / | A | ≥331 | ≥207 | | / | / | | | D>73.02 <508 | +15.0% -12.5% | | | normalizing + tempering | √ | |
| | | ≤0.28 | ≤1.20 | / | / | / | / | ≤0.030 | ≤0.030 | / | / | / | / | / | / | B | ≥414 | ≥241 | | / | / | | | | | | +30 -0 | Quenching + tempering | √ | |
| | | ≤0.28 | ≤1.30 | / | / | / | / | ≤0.030 | ≤0.030 | / | / | / | / | / | / | X42 | ≥414 | ≥290 | | / | / | 60.3~＜508 | ±0.75% | D≤73.02 | +15% -12.5% | | | Quenching + tempering | √ | |
| | | ≤0.28 | ≤1.40 | / | / | / | / | ≤0.030 | ≤0.030 | / | / | / | / | / | / | X52 | ≥455 | ≥359 | | / | / | | | D>73.02 <508 | +15% -12.5% | | | Quenching + tempering | √ | |
| API 5D | G-105 | / | / | / | / | / | / | ≤0.030 | ≤0.030 | / | / | / | / | / | / | G105 | ≥793 | 724~931 | ≥16.5 | 21℃ 10×10×55 | ≥54 | ≤101.6 | ±0.79 | | ≥-12.5% | | | Quenching + tempering | / | × |
| | | | | | | | | | | | | | | | | | | | | | | ≥114.3 | +1% -0.5% | | | | | | | |

| Seamless steel pipe, straight seam steel pipe, spiral steel pipe, stainless steel pipe | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Nominal diameter DN | Imperial | Outer diameter of steel pipe | thickness of pipe wall（mm) and theoretical weight（m/kg） | | | | | | | | | | | |
| | | | 2.5 | 3 | 3.5 | 4 | 4.5 | 5 | 6 | 7 | 8 | 9 | 10 | 12 |
| 15 | 1/2" | 18 | 0.956 | 1.11 | 1.25 | 1.38 | 1.5 | 1.6 | | | | | | |
| 20 | 3/4" | 25 | 1.39 | 1.63 | 1.86 | 2.07 | 2.28 | 2.47 | 2.81 | 3.11 | | | | |
| 25 | 1" | 32 | 1.76 | 2.15 | 2.46 | 2.76 | 3.05 | 3.33 | 3.85 | 4.32 | 4.47 | | | |
| 32 | 1 1/4" | 38 | 2.19 | 2.59 | 2.98 | 3.35 | 3.72 | 4.07 | 4.74 | 5.35 | 5.95 | | | |
| 40 | 1 1/2" | 45 | 2.62 | 3.11 | 3.58 | 4.04 | 4.49 | 4.93 | 5.77 | 6.56 | 7.3 | 7.99 | | |
| 50 | 2" | 57 | 3.36 | 4 | 4.62 | 5.23 | 5.83 | 6.41 | 7.55 | 8.63 | 9.67 | 10.65 | | |
| 65 | 2 1/2" | 76 | 4.53 | 5.4 | 6.26 | 7.1 | 7.93 | 8.75 | 10.36 | 11.91 | 13.12 | 14.37 | | |
| 80 | 3" | 89 | 5.33 | 6.36 | 7.38 | 8.38 | 9.38 | 10.36 | 12.28 | 14.16 | 15.98 | 17.76 | | |
| 100 | 4" | 108 | 6.5 | 7.77 | 9.02 | 10.26 | 11.49 | 12.7 | 15.09 | 17.44 | 19.73 | 21.97 | | |
| 125 | 5" | 133 | | | | 12.73 | 14.26 | 15.78 | 18.79 | 21.75 | 24.66 | 27.52 | 30.3 | 35.81 |
| 150 | 6" | 159 | | | | | 17.15 | 18.99 | 22.64 | 26.24 | 29.79 | 33.29 | 36.8 | 43.5 |
| 200 | 8" | 219 | | | | | | | 31.52 | 36.6 | 41.63 | 46.61 | 51.5 | 61.26 |
| 250 | 10" | 273 | | | | | | | 39.51 | 45.92 | 52.28 | 58.6 | 64.9 | 77.24 |
| 300 | 12" | 325 | | | | | | | 47.2 | 54.89 | 62.54 | 70.14 | 77.7 | 92.63 |
| 350 | 14" | 377 | | | | | | | 54.89 | 63.87 | 72.8 | 81.68 | 90.5 | 108 |
| 400 | 16" | 426 | | | | | | | 62.14 | 72.33 | 82.46 | 92.55 | 103 | 122.5 |
| 450 | 18" | 480 | | | | | | | | | 93.12 | 104.54 | 116 | 139.5 |
| 500 | 20" | 530 | | | | | | | | | 102.98 | 115.62 | 128 | 154.3 |
| 600 | 24" | 630 | | | | | | | | | 122.71 | 137.83 | 153 | 182.9 |

This table is the theoretical weight of commonly used steel pipes. The calculation formulas for other specifications are as follows：（outer diameter mm-wall thickness mm）*wall thickness mm*0.0246615=weight kg/m



Company: GKsteelpipe Web: www.gksteelpipe.com Email: eva@gksteelpipe.com Tel: +86 13991232350

| Composition and mechanical properties of commonly used carbon steel and alloy steel | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| steel | standard | | C | Si | Mn | P | S | Cr | Ni | Mo | Al | Cu | Ti | V | Nb | tensile strength (Mpa) | Yield Strength (Mpa) | Elongation % | Shrinkage % | Test temp. | Shock J | Hardness HB |
| A105 | ASTM A105-2011 | MIN | | 0.10 | 0.60 | | | | | | | | | | | 485 | 250 | 22 | 30 | | | |
| | | MAX | 0.35 | 0.35 | 1.05 | 0.035 | 0.040 | 0.30 | 0.40 | 0.12 | | 0.40 | | 0.08 | | | | | | | | 187 |
| 20# | 俄标 | MIN | 0.17 | 0.17 | 0.35 | | | | | | | | | | | 390 | 195 | 26 | 55 | | | 111 |
| | | MAX | 0.24 | 0.37 | 0.65 | 0.035 | 0.040 | 0.25 | 0.30 | | | 0.30 | | | | | | | | | | 156 |
| 20# | JB/T4726-2000 | MIN | 0.17 | 0.17 | 0.60 | | | | | | | | | | | 390 | 215 | 24 | | 20℃ | 34 | 106 |
| | | MAX | 0.23 | 0.37 | 1.00 | 0.03 | 0.020 | 0.25 | 0.25 | | | 0.25 | | | | 540 | | | | | | 159 |
| 20# | NB/T47008-2010 | MIN | 0.17 | 0.15 | 0.60 | | | | | | | | | | | 410～560 | 235 | 24 | | 0℃ | 31 | 110～160 |
| | | | | | | | | | | | | | | | | 400～550 | 225 | 24 | | | | |
| | | MAX | 0.23 | 0.40 | 1.00 | 0.030 | 0.020 | 0.25 | 0.25 | | | 0.25 | | | | 380～530 | 205 | 24 | | | | |
| C21 | VdTUV399/3:2007 | MIN | 0.18 | 0.15 | 0.80 | | | | | | | | | | | 485 | 250 | 20 | 45 | 20℃ | 31 | 143 |
| | | MAX | 0.23 | 0.35 | 1.35 | 0.035 | 0.030 | 0.30 | 0.40 | 0.12 | | 0.40 | | 0.030 | 0.020 | 630 | | | | | | 185 |
| C22.8 | VdTUV350/3:2009 | MIN | 0.18 | | 0.40 | | | | | | 0.015 | | | | | 410 | 250 | 20 | | 20℃ | 31 | 125 |
| 1.0460 | | MAX | 0.23 | 0.40 | 0.90 | 0.025 | 0.015 | 0.30 | 0.30 | 0.08 | 0.050 | 0.30 | | 0.020 | 0.010 | 540 | | | | | | 160 |
| 20Mn | GB/T699-1999 | MIN | 0.17 | 0.17 | 0.70 | | | | | | | | | | | 450 | 275 | 24 | 50 | | | |
| | | MAX | 0.23 | 0.37 | 1.00 | 0.035 | 0.035 | 0.25 | 0.30 | | | 0.25 | | | | | | | | | | |
| P245GH | EN10222-2:2000 | MIN | 0.08 | | 0.50 | | | | | | | | | | | 410 | 245 | 23 | | 20℃ | 27 | 125 |
| 1.0352 | | MAX | 0.20 | 0.40 | 1.30 | 0.025 | 0.015 | | 0.30 | 0.08 | | 0.30 | | 0.020 | 0.010 | 530 | | | | | | 160 |

| | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P280GH | EN10222-2:2000 | MIN | 0.08 | | 0.90 | | | | | | | | | | | 460 | 280 | 23 | | | | |
| 1.0426 | | MAX | 0.20 | 0.40 | 1.50 | 0.025 | 0.015 | | 0.30 | 0.08 | | 0.30 | | 0.020 | 0.01 | 580 | | | | | | |
| A350LF2 | ASTM A350:2010 | MIN | | 0.15 | 0.60 | | | | | | | | | | | 485 | 250 | 22 | 30 | –46℃ | 27 | |
| | | MAX | 0.30 | 0.30 | 1.35 | 0.035 | 0.040 | 0.30 | 0.40 | 0.12 | | 0.40 | | 0.030 | | 655 | | | | | | 197 |
| A350LF6 | ASTM A350:2010 | MIN | 0.22 | 0.15 | 1.15 | | | | | | | | | 0.04 | N 0.01 | 515 | 415 | 20 | 40 | | | |
| | | MAX | | 0.30 | 1.50 | 0.025 | 0.025 | 0.30 | 0.40 | 0.12 | | 0.40 | | 0.11 | N 0.03 | 690 | | | | | | 197 |
| Q235A | GB/T700-2006 | MIN | | | | | | | | | | | | | | 375 | 235 | 26 | | | | |
| | | MIX | 0.22 | 0.35 | 1.40 | 0.045 | 0.050 | | | | | | | | | 500 | | | | | | |
| Q235B | GB/T700-2006 | MIN | | | | | | | | | | | | | | 375 | 235 | 26 | | 20℃ | 27 | |
| | | MIX | 0.20 | 0.35 | 1.40 | 0.045 | 0.045 | | | | | | | | | 500 | | | | | | |
| P265GH | DIN10222-2 | MIN | 0.10 | 0.20 | 0.50 | | | | | 0.020 | | | | | | 410 | 265 | 23 | | | 31 | 138 |
| | | MAX | 0.20 | 0.40 | 1.40 | 0.025 | 0.020 | 0.30 | 0.30 | 0.08 | | 0.30 | 0.030 | 0.020 | | 530 | | | | | | 170 |
| P250GH | DIN10222-2 | MIN | 0.18 | | 0.40 | | | | | 0.015 | | | | | | 410 | 250 | 20 | | | 31 | 125 |
| 1.0460 | | MAX | 0.23 | 0.40 | 0.90 | 0.025 | 0.015 | 0.30 | 0.30 | 0.08 | 0.050 | 0.30 | | 0.020 | 0.010 | 540 | | | | | | 160 |
| 16Mn | NB/T47008-2010 | MIN | 0.13 | 0.20 | 1.20 | | | | | | | | | | | 480～630 | 305 | 20 | | 0℃ | 34 | 128～180 |
| | | | | | | | | | | | | | | | | 470～620 | 295 | 20 | | | | |
| | | MAX | 0.20 | 0.60 | 1.60 | 0.030 | 0.020 | 0.30 | 0.30 | | | 0.25 | | | | 450～600 | 275 | 20 | | | | |
| Steel | standard | | C | Si | Mn | P | S | Cr | Ni | Mo | Al | Cu | Ti | V | Nb | tensile strength (Mpa) | Yield Strength (Mpa) | Elongation % | Shrinkage % | Test temp. | Shock J | Hardness HB |
| 16MnD | NB/T47009-2010 | MIN | 0.13 | 0.20 | 1.20 | | | | | | | | | | | 480～630 | 305 | 20 | | –45℃ | 47 | |
| | | | | | | | | | | | | | | | | 470～620 | 295 | 20 | | –40℃ | | |
| | | MAX | 0.20 | 0.60 | 1.60 | 0.025 | 0.012 | 0.30 | 0.40 | | | 0.25 | | | 0.030 | 450～600 | 275 | 20 | | | | |
| 16Mn(HIC) | | MIN | | 0.20 | 1.15 | | | | | | O | Cep | | | | 450 | 275 | 20 | | –30℃ | 34 | |
| | | MAX | 0.20 | 0.40 | 1.30 | 0.008 | 0.002 | | 0.20 | | <0.004 | 0.43 | | | | 600 | | | | | | |
| Q345A/B | GB1591-2008 | MIN | | | | | | | | | | | | | | 470 | 345 | 20 | | | | |
| | | MAX | 0.20 | 0.50 | 1.70 | 0.035 | 0.035 | 0.30 | 0.50 | 0.10 | | 0.30 | 0.20 | 0.15 | 0.07 | 630 | | | | | | |
| Q345C | GB1591-2008 | MIN | | | | | | | | | 0.015 | | | | | 470 | 345 | 20 | | | | |
| | | MAX | 0.20 | 0.50 | 1.70 | 0.030 | 0.030 | 0.30 | 0.50 | 0.10 | | 0.30 | 0.20 | 0.15 | 0.07 | 630 | | | | | | |
| Q345D | GB1591-2008 | MIN | | | | | | | | | 0.015 | | | | | 470 | 345 | 21 | | | | |
| | | MAX | 0.18 | 0.50 | 1.70 | 0.030 | 0.025 | 0.30 | 0.50 | 0.10 | | 0.30 | 0.20 | 0.15 | 0.07 | 630 | | | | | | |
| Q345E | GB1591-2008 | MIN | | | | | | | | | 0.015 | | | | | 470 | 345 | 21 | | | | |
| | | MAX | 0.18 | 0.50 | 1.70 | 0.025 | 0.020 | 0.30 | 0.50 | 0.10 | | 0.30 | 0.20 | 0.15 | 0.07 | 630 | | | | | | |
| Q460C | GB1591-2008 | MIN | | | | | | | | | 0.015 | | | | | 550～720 | ≥400 | ≥16 | | 0℃ | 34 | |
| | | MAX | 0.20 | 0.60 | 1.80 | 0.030 | 0.030 | 0.30 | 0.80 | 0.20 | | 0.55 | 0.20 | 0.20 | 0.11 | 530～700 | ≥380 | ≥16 | | | | |
| Q500D | GB1591-2008 | MIN | | | | | | | | | 0.015 | | | | | 590～750 | ≥450 | ≥17 | | –20℃ | 47 | |
| | | MAX | 0.18 | 0.60 | 1.80 | 0.030 | 0.025 | 0.60 | 0.80 | 0.20 | | 0.20 | 0.20 | 0.12 | 0.11 | 540～730 | ≥440 | ≥17 | | | | |
| Q550D | GB1591-2008 | MIN | | | | | | | | | 0.015 | | | | | 600～790 | ≥500 | ≥16 | | –20℃ | 47 | |
| | | MAX | 0.18 | 0.60 | 2.00 | 0.030 | 0.025 | 1.00 | 0.80 | 0.30 | | 0.80 | 0.20 | 0.12 | 0.11 | 590～780 | ≥490 | ≥16 | | | | |
| 09Г$_2$С | Russian standard | MIN | 0.07 | 0.50 | 1.30 | | | | | | | | | | | 470 | 245 | 22 | 48 | -60℃ | 30 | 143 |
| | | MAX | 0.12 | 0.80 | 1.70 | 0.040 | 0.040 | 0.30 | 0.30 | | | 0.30 | | | | | | | | | | 179 |
| ST37.2 | | MIN | 0.10 | 0.15 | 0.50 | | | | | | | | | | | 340 | 235 | 24 | | 20℃ | 27 | 100 |
| | | MIX | 0.17 | 0.25 | 1.40 | 0.045 | 0.045 | | | | | 0.30 | | | | 470 | | | | | | 140 |
| S235JRG2 | EN10250-2 | MIN | | | | | | | | | | | | | | 340 | 235 | 24 | | 20℃ | 27 | 100 |
| | | MIX | 0.20 | 0.55 | 1.40 | 0.045 | 0.045 | | | | | | | | | 470 | | | | | | 140 |

| | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A516 F60 | ASTM A516-2010 | MIN | | 0.15 | 0.60 | | | | | | | | | | | 415 | 220 | 25 | | | | |
| | | MAX | 0.21 | 0.40 | 0.90 | 0.035 | 0.035 | | | | | | | | | 550 | | | | | | |
| A516 F65 | ASTM A516-2010 | MIN | | 0.15 | 0.85 | | | | | | | | | | | 450 | 240 | 23 | | | | |
| | | MAX | 0.24 | 0.40 | 1.20 | 0.035 | 0.035 | | | | | | | | | 585 | | | | | | |
| A516 F70 | ASTM A516-2010 | MIN | | 0.15 | 0.85 | | | | | | | | | | | 485 | 260 | 21 | | | | |
| | | MAX | 0.27 | 0.40 | 1.20 | 0.035 | 0.035 | | | | | | | | | 620 | | | | | | |
| A694 F52 | ASTM A694:2008 | MIN | | 0.15 | | | | | | | | | | | | 455 | 360 | 20 | | | | |
| | | MAX | 0.26 | 0.35 | 1.60 | 0.025 | 0.025 | | | | | | | | | | | | | | | |
| A694 F60 | ASTM A694:2008 | MIN | | 0.15 | | | | | | | | | | | | 515 | 415 | 20 | | | | |
| | | MAX | 0.26 | 0.35 | 1.60 | 0.025 | 0.025 | | | | | | | | | | | | | | | |
| A694 F65 | ASTM A694:2008 | MIN | | 0.15 | | | | | | | | | | | | 530 | 450 | 20 | | | | |
| | | MAX | 0.26 | 0.35 | 1.60 | 0.025 | 0.025 | | | | | | | | | | | | | | | |
| A694 F70 | ASTM A694:2008 | MIN | | 0.15 | | | | | | | | | | | | 565 | 485 | 18 | | | | |
| | | MAX | 0.26 | 0.35 | 1.60 | 0.025 | 0.025 | | | | | | | | | | | | | | | |
| Steel | standard | | C | Si | Mn | P | S | Cr | Ni | Mo | Al | Cu | Ti | V | Nb | tensile strength (Mpa) | Yield Strength (Mpa) | Elongation % | Shrinkage % | Test temp. | Shock J | Hardness HB |
| F11 Class2 | ASTM A182-2013 | MIN | 0.10 | 0.50 | 0.30 | | | 1.00 | | 0.44 | | | | | | 485 | 275 | 20 | 30 | | | 156 |
| | | MAX | 0.20 | 1.00 | 0.80 | 0.040 | 0.040 | 1.50 | | 0.65 | | | | | | | | | | | | 207 |
| F5 | ASTM A182-2013 | MIN | | | 0.30 | | | 4.00 | | 0.44 | | | | | | 485 | 275 | 20 | 35 | | | 143 |
| | | MAX | 0.15 | 0.50 | 0.60 | 0.030 | 0.030 | 6.00 | 0.50 | 0.65 | | | | | | | | | | | | 217 |
| F5A | ASTM A182-2013 | MIN | | | | | | 4.00 | | 0.44 | | | | | | 620 | 450 | 22 | 50 | | | 187 |
| | | MAX | 0.25 | 0.50 | 0.60 | 0.040 | 0.030 | 6.00 | 0.50 | 0.65 | | | | | | | | | | | | 248 |
| F9 | ASTM A182-2013 | MIN | | 0.50 | 0.30 | | | 8.00 | | 0.90 | | | | | | 585 | 380 | 20 | 40 | | | 179 |
| | | MAX | 0.15 | 1.00 | 0.60 | 0.030 | 0.030 | 10.00 | | 1.10 | | | | | | | | | | | | 217 |
| F22 Class3 | ASTM A182-2013 | MIN | 0.05 | | 0.30 | | | 2.00 | | 0.87 | | | | | | 515 | 310 | 20 | 30 | | | 156 |
| | | MAX | 0.15 | 0.50 | 0.60 | 0.04 | 0.040 | 2.50 | | 1.13 | | | | | | | | | | | | 207 |
| 1Cr5Mo | NB/T47008-2010 | MIN | | | | | | 4.00 | | 0.45 | | | | | | 590 | 390 | 18 | | 20℃ | 47 | |
| | | MAX | 0.15 | 0.50 | 0.60 | 0.025 | 0.015 | 6.00 | 0.50 | 0.65 | | 0.25 | | | | 760 | | | | | | |
| 15CrMo | NB/T47008-2010 | MIN | 0.12 | 0.10 | 0.30 | | | 0.80 | | 0.45 | | | | | | 480～640 | 280 | 20 | | 20℃ | 47 | |
| | | MAX | 0.18 | 0.60 | 0.80 | 0.025 | 0.015 | 1.25 | 0.30 | 0.65 | | 0.25 | | | | 470～630 | 270 | 20 | | | | |
| 12Cr1MoV | NB/T47008-2010 | MIN | 0.09 | 0.15 | 0.40 | | | 0.90 | | 0.25 | | | | 0.15 | | 470～630 | 280 | 20 | | 20℃ | 47 | |
| | | MAX | 0.15 | 0.40 | 0.70 | 0.025 | 0.015 | 1.20 | 0.30 | 0.35 | | 0.25 | | 0.30 | | 460～620 | 270 | 20 | | | | |
| 09MnNiD | NB/T47009-2010 | MIN | 0.06 | 0.15 | 1.20 | | | | 0.45 | | | | | | | 440～590 | 280 | 23 | | -70℃ | 60 | |
| | | MAX | 0.12 | 0.35 | 1.60 | 0.020 | 0.010 | 0.30 | 0.85 | | 0.05 | 0.25 | | | | 430～580 | 270 | 23 | | | | |
| 16Mo3 1.5415 | EN10222-2:2000 | MIN | 0.12 | | 0.40 | | | | | 0.25 | | | | | | 440 | 295 | 23 | | | | |
| | | MAX | 0.20 | 0.35 | 0.90 | 0.025 | 0.015 | | | 0.35 | | | | | | 570 | | | | | | |
| 13CrMo4-5 1.7335 | EN10222-2:2000 | MIN | 0.08 | | 0.40 | | | 0.70 | | 0.40 | | | | | | 440 | 295 | 20 | | 20℃ | 31 | 156 |
| | | MAX | 0.18 | 0.35 | 1.00 | 0.025 | 0.015 | 1.15 | | 0.60 | | | | | | 590 | | | | | | |
| 42CrMo | GB3077-88 | MIN | 0.38 | | 0.60 | | | 0.90 | | 0.15 | | | | | | 800 | 640 | 13 | 50 | | | |
| | | MAX | 0.45 | 0.40 | 0.90 | 0.035 | 0.035 | 1.20 | | 0.30 | | | | | | 1100 | | | | | | 240 |
| 20MnMo | GB3077-88 | MIN | 0.16 | 0.17 | 0.90 | | | | | 0.20 | | | | | | 530 | 370 | 18 | | 0℃ | 41 | |
| | | MAX | 0.22 | 0.37 | 1.20 | 0.030 | 0.035 | | | 0.30 | | | | | | 700 | | | | | | |

| Nominal diamet | Imperial | Outer diameter | | thickness of pipe wall（mm) and theoretical weight（m/kg） | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | A | B | 2.5 | 3 | 3.5 | 4 | 4.5 | 5 | 6 | 7 | 8 | 9 | 10 | 12 |
| 15 | 1/2" | 21.3 | 18 | 0.956 | 1.11 | 1.25 | 1.38 | 1.5 | 1.6 | | | | | | |
| 20 | 3/4" | 26.9 | 25 | 1.39 | 1.63 | 1.86 | 2.07 | 2.28 | 2.47 | 2.81 | 3.11 | | | | |
| 25 | 1" | 33.7 | 32 | 1.76 | 2.15 | 2.46 | 2.76 | 3.05 | 3.33 | 3.85 | 4.32 | 4.47 | | | |
| 32 | 1 1/4" | 42.4 | 38 | 2.19 | 2.59 | 2.98 | 3.35 | 3.72 | 4.07 | 4.74 | 5.35 | 5.95 | | | |
| 40 | 1 1/2" | 48.3 | 45 | 2.62 | 3.11 | 3.58 | 4.04 | 4.49 | 4.93 | 5.77 | 6.56 | 7.3 | 7.99 | | |
| 50 | 2" | 60.3 | 57 | 3.36 | 4 | 4.62 | 5.23 | 5.83 | 6.41 | 7.55 | 8.63 | 9.67 | 10.7 | | |
| 65 | 2 1/2" | 76.1 | 76 | 4.53 | 5.4 | 6.26 | 7.1 | 7.93 | 8.75 | 10.36 | 11.91 | 13.12 | 14.4 | | |
| 80 | 3" | 88.9 | 89 | 5.33 | 6.36 | 7.38 | 8.38 | 9.38 | 10.36 | 12.28 | 14.16 | 15.98 | 17.8 | | |
| 100 | 4" | 114.3 | 108 | 6.5 | 7.77 | 9.02 | 10.26 | 11.49 | 12.7 | 15.09 | 17.44 | 19.73 | 22 | | |
| 125 | 5" | 139.7 | 133 | | | | 12.73 | 14.26 | 15.78 | 18.79 | 21.75 | 24.66 | 27.5 | 30.33 | 35.8 |
| 150 | 6" | 168.3 | 159 | | | | | 17.15 | 18.99 | 22.64 | 26.24 | 29.79 | 33.3 | 36.75 | 43.5 |
| 200 | 8" | 219.1 | 219 | | | | | | | 31.52 | 36.6 | 41.63 | 46.6 | 51.54 | 61.3 |
| 250 | 10" | 273 | 273 | | | | | | | 39.51 | 45.92 | 52.28 | 58.6 | 64.86 | 77.2 |
| 300 | 12" | 323.9 | 325 | | | | | | | 47.2 | 54.89 | 62.54 | 70.1 | 77.68 | 92.6 |
| 350 | 14" | 355.4 | 377 | | | | | | | 54.89 | 63.87 | 72.8 | 81.7 | 90.51 | 108 |
| 400 | 16" | 406.4 | 426 | | | | | | | 62.14 | 72.33 | 82.46 | 92.6 | 102.6 | 123 |
| 450 | 18" | 457 | 480 | | | | | | | | | 93.12 | 105 | 115.9 | 139 |
| 500 | 20" | 508 | 530 | | | | | | | | | 102.98 | 116 | 128.2 | 154 |
| 600 | 24" | 610 | 630 | | | | | | | | | 122.71 | 138 | 152.9 | 183 |



1、Seamless steel pipe, welded steel pipe (straight seam pipe and spiral steel pipe), stainless steel pipe, etc.

2、A series is international universal series (imperial tube), B series is domestic series (metric tube)