



Solid 山西索立得工贸有限公司

Shanxi Solid Industrial Co.,Ltd.

CARBON STEEL PIPE FITTINGS

Shanxi Solid Industrial Co.,Ltd.

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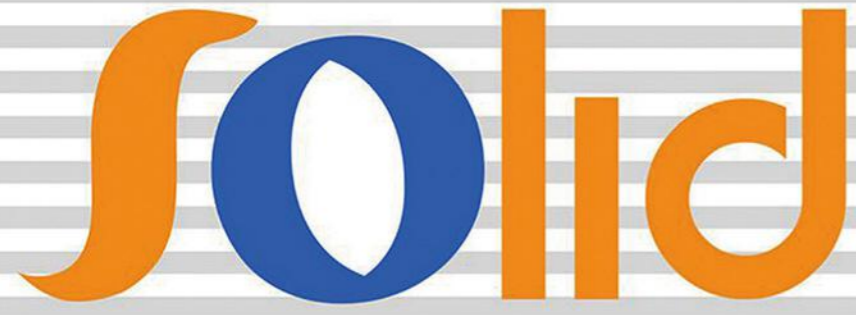
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For years
we supply customers
quality goods with quick delivery,
we are still
trying our best to do better and better.
Your demand
is what we supply
Shanxi Solid Industrial Co.,Ltd.---
The company
you can rely on to be competitive!

We are the castings specialist,
we are the pipeline specialist!

SHANXI SOLID INDUSTRIAL CO., LTD.

Company Profile

SHANXI SOLID INDUSTRIAL CO.,LTD. is located in the heavy industry province of Shanxi, China with rich resources of pig irons ,coke, steel and other industrial raw materials , we are one of the leading manufacturers of steel pipes, steel pipe fittings, steel flanges, valves, fasteners and other steel products according to various international standards such as ANSI, ASTM, ASME, BS, JIS, GB, etc. Our products are widely used in pipeline system for drinkable water, sewage, oil, gas, chemical plants and so on, and they have been widely exported to Europe, Middle East, South East Asia, Africa, Middle and South America for years. Up to now, we have exported our products to more than seventy countries, they are well accepted by the customers and have won good reputation both at home and abroad.

The business principle of Shanxi Solid Industrial Co.,LTD is credit and sincerity . We are eager to get your inquiries and to establish long term mutual benefit cooperation relationship. We have our advantage in manufacturing and you have your advantages in sales, we are sure with our working together we can get one "in-in" situation .We hope we can grow together!



公司设备
Company equipment

• 22000T多向模锻压力机



公司自主研发22000T多向模锻压力机，可实现对DN1200以下正、斜三通和四通的一次性冷成型。单上缸最大压力可达10000T，可最大热压三通壁厚250mm。

技术参数：工作台尺寸4500mm × 3600mm

最大压制高度：4800mm

最大压制行程：2600mm



• 6000T三通机



• 中频推制机



• 燃煤加热炉



• 天然气热处理炉



• 车床



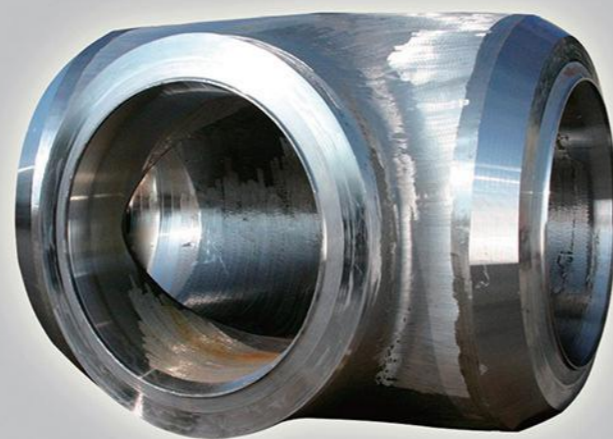
• 立车

常规产品
Conventional product

常规产品
Conventional product



• 无缝冷拔三通



• 高压厚壁热压三通



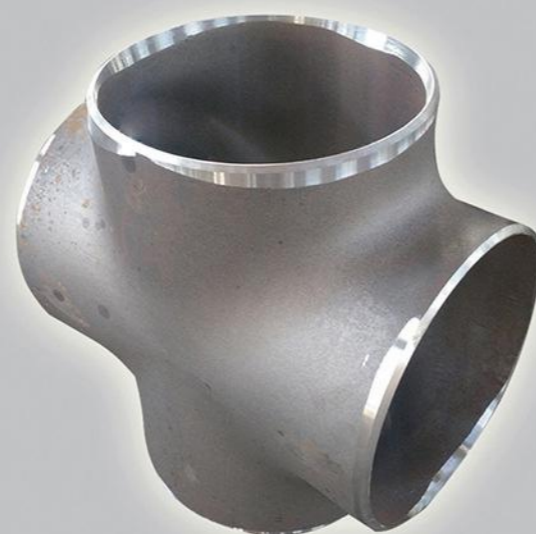
• 无缝冷拔三通



• 无缝冷拔三通



• 无缝等径四通



• 无缝等径四通



• 高压厚壁热压三通



• 无缝冷拔三通

常规产品
Conventional product

常规产品
Conventional product



· 大口径焊缝三通



· 大口径焊缝弯头



· 异径管



· 异径管



· 无缝弯头



· 高压厚壁无缝弯头



· 管帽



· 法兰



特殊产品
Special product



• 配管



• 汇气管

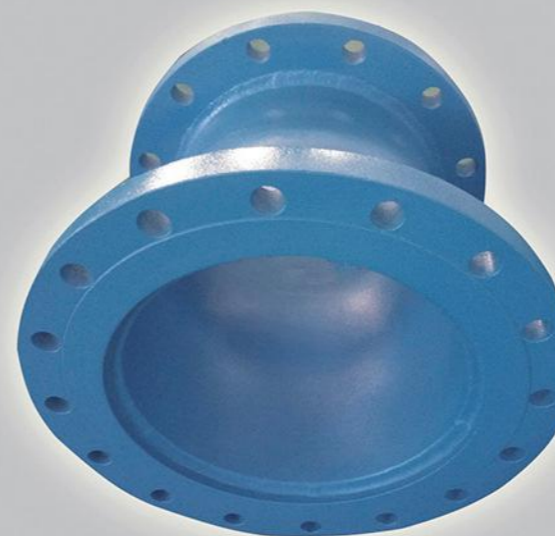
特殊产品
Special product



• 无缝斜三通



• 焊接斜三通



• 法兰管件

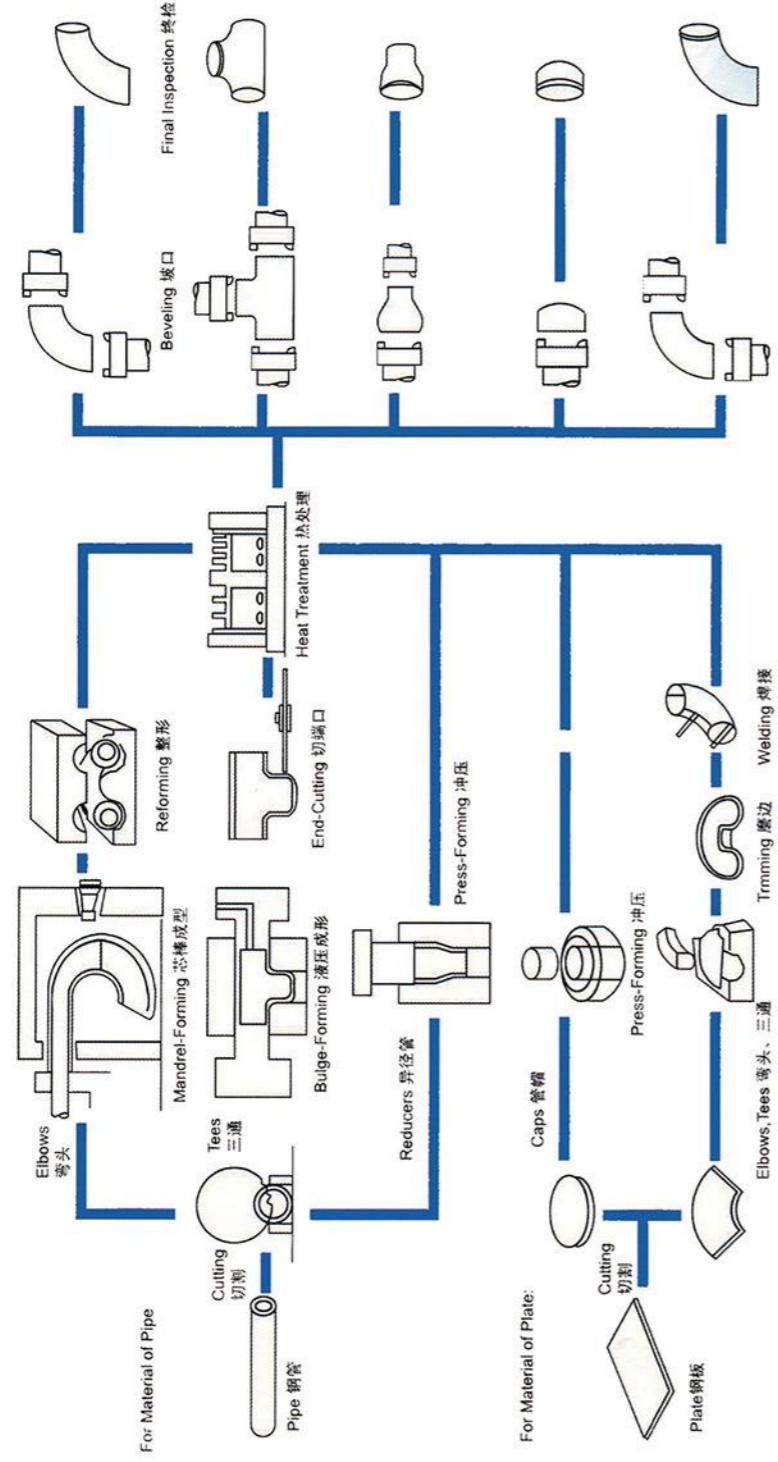


• 焊接斜三通

工艺流程
technological process

技术标准
Technical standards

Production Process
生产工艺流程图



钢管尺寸表-ASME B36.10M-2004 ASNE B36.19M-2004 Dimensions of Pipes

NPS	DN	外径 Outside Diameter	ASME B36.10M-无缝和焊接轧制钢管厚度-SCH Welded and seamless wrought steel pipe													ASME B36.19M-不锈钢管-SCH Stainless Pipe				DN	NPS					
			STD	XS	XXS	10	20	30	40	60	80	100	120	140	160	5S	10S	40S	80S							
1/2	15	21.3	2.77	3.73	7.47	2.11														1.65	2.11	2.77	3.73	21.3	15	1/2
3/4	20	26.7	2.87	3.91	7.82	2.11														1.65	2.11	2.87	3.91	26.7	20	3/4
1	25	33.4	3.38	4.55	9.09	2.77														1.65	2.77	3.38	4.55	33.4	25	1
1 1/4	32	42.2	3.56	4.85	9.70	2.77														1.65	2.77	3.56	4.85	42.2	32	1 1/4
1 1/2	40	48.3	3.68	5.08	10.15	2.77														1.65	2.77	3.68	5.08	48.3	40	1 1/2
2	50	60.3	3.91	5.54	11.07	2.77														1.65	2.77	3.91	5.54	60.3	50	2
2 1/2	65	73.0	5.16	7.01	14.02	3.05														2.11	3.05	5.16	7.01	73.0	65	2 1/2
3	80	88.9	5.49	7.62	15.24	3.05														2.11	3.05	5.49	7.62	88.9	80	3
3 1/2	90	101.6	5.74	8.08	16.16	3.05														2.11	3.05	5.74	8.08	101.6	90	3 1/2
4	100	114.3	6.02	8.56	17.12	3.05														2.11	3.05	6.02	8.56	114.3	100	4
5	125	141.3	6.55	9.53	19.05	3.40														2.77	3.40	6.55	9.53	141.3	125	5
6	150	168.3	7.11	10.97	21.95	3.40														2.77	3.40	7.11	10.97	168.3	150	6
8	200	219.1	8.18	12.70	22.23	3.76	6.35	7.04	8.18	10.31	12.70	15.09	18.26	20.62	23.01	27.7	3.76	8.18	2.11	3.05	5.74	8.08	219.1	200	8	
10	250	273.0	9.27	12.70	25.40	4.19	6.35	7.80	9.27	12.70	15.09	18.26	21.44	25.40	28.58	33.32	3.96	4.57	2.77	3.76	6.02	8.56	273.0	250	10	
12	300	323.8	9.53	12.70	25.40	4.57	6.35	8.38	10.31	14.27	17.48	21.44	25.40	28.58	33.32	39.6	4.78	5.54	2.77	4.78	6.55	9.53	323.8	300	12	
14	350	355.6	9.53	12.70		6.35	7.92	9.53	11.13	15.09	19.05	23.83	27.79	31.75	35.71	40.49	4.96	5.74	2.77	5.74	7.11	10.97	355.6	350	14	
16	400	406.4	9.53	12.70		6.35	7.92	9.53	11.13	14.27	19.05	23.83	27.79	31.75	35.71	40.49	4.96	5.74	2.77	5.74	7.11	10.97	406.4	400	16	
18	450	457	9.53	12.70		6.35	7.92	9.53	11.13	14.27	19.05	23.83	27.79	31.75	35.71	40.49	4.96	5.74	2.77	5.74	7.11	10.97	457	450	18	
20	500	508	9.53	12.70		6.35	9.53	12.70	15.09	20.62	26.19	32.54	38.10	44.45	50.01	55.57	5.54	6.35	2.77	6.35	7.92	12.70	508	500	20	
22	550	559	9.53	12.70		6.35	9.53	12.70	15.09	20.62	26.19	32.54	38.10	44.45	50.01	55.57	5.54	6.35	2.77	6.35	7.92	12.70	559	550	22	
24	600	610	9.53	12.70		6.35	9.53	12.70	15.09	20.62	26.19	32.54	38.10	44.45	50.01	55.57	5.54	6.35	2.77	6.35	7.92	12.70	610	600	24	
26	650	660	9.53	12.70		7.92	12.70													5.54	6.35	7.92	12.70	660	650	26
28	700	711	9.53	12.70		7.92	12.70													5.54	6.35	7.92	12.70	711	700	28
30	750	762	9.53	12.70		7.92	12.70													6.35	7.92	9.53	12.70	762	750	30
32	800	813	9.53	12.70		7.92	12.70													6.35	7.92	9.53	12.70	813	800	32
34	850	864	9.53	12.70		7.92	12.70													6.35	7.92	9.53	12.70	864	850	34
36	900	914	9.53	12.70		7.92	12.70													6.35	7.92	9.53	12.70	914	900	36
38	950	965	9.53	12.70		7.92	12.70													6.35	7.92	9.53	12.70	965	950	38
40	1000	1016	9.53	12.70		7.92	12.70													6.35	7.92	9.53	12.70	1016	1000	40
42	1050	1067	9.53	12.70		7.92	12.70													6.35	7.92	9.53	12.70	1067	1050	42
44	1100	1118	9.53	12.70		7.92	12.70													6.35	7.92	9.53	12.70	1118	1100	44
46	1150	1168	9.53	12.70		7.92	12.70													6.35	7.92	9.53	12.70	1168	1150	46
48	1200	1219	9.53	12.70		7.92	12.70													6.35	7.92	9.53	12.70	1219	1200	48

技术标准
Technical standards

技术标准
Technical standards

坡口及公差-ASME B16.9-2007 End Preparation&Tolerances

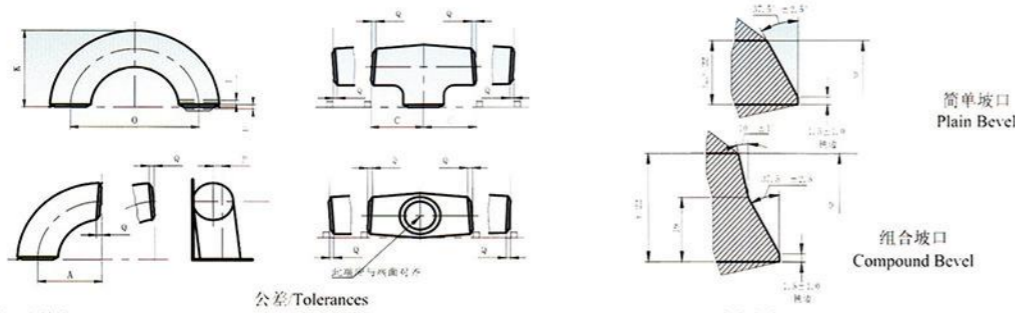


表1 公差表/ Table 1 Tolerances 尺寸为毫米/All Dimensions are in millimeters

所有管配件/All Fittings				壁厚Wall Thickness t	90°和45°弯头及三通90°and 45° Long and Short Radius Elbows and Tees A,B,C,M	异径管和搭接管 Overall Length of Reducers and Lap joint stub ends,F,H	管帽总长 Overall Length of Caps E	180°弯头>Returns	
公称管规格 Nominal Pipe Size NPS	公称直径 Nominal Diameter DN	坡口处外径 Outside Diameter at Bevel, D	坡口处内径 Inside Diameter at Bevel					中心至中心 Center-to-Center Dimensions O	背部至端面 Back-to-Face Dimensions K
1/2-2 1/2	15-65	+1.6, -0.8	0.8	不小于公称壁厚的87.5%, Not Less Than 87.5% of Nominal Thickness	2	2	3	6	6
3-3 1/2	80-90	1.6	1.6		2	2	3	6	6
4	100	1.6	1.6		2	2	3	6	6
5-8	125-200	+2.4, -1.6	1.6		2	2	6	6	6
10-18	250-450	+4.0, -3.2	3.2		2	2	6	10	6
20-24	500-600	+6.4, -4.8	4.8		2	2	6	10	6
26-30	650-750	+6.4, -4.8	4.8		3	5	10	-	-
32-48	800-1200	+6.4, -4.8	4.8		5	5	10	-	-

公称管规格 Nominal Pipe Size NPS	公称直径 Nominal Diameter DN	搭接接管端部/Lap Joint Stub Ends			公称管规格 Nominal Pipe Size NPS	公称直径 Nominal Diameter DN	角度公差/Angularity Tolerances		
		搭接边外径 Outside Diameter of Lap, G	搭接边倒角半径 Fillet Radius of Laps, R	搭接边厚度 Lap Thickness			Off Angle, Q	Off Plane P	Alignment of ends, U
1/2-2 1/2	15-65	+0, -1	+0, -1	+1.6, -0	1/2-4	15-100	1	2	1
3-3 1/2	80-90	+0, -1	+0, -1	+1.6, -0	5-8	125-200	2	4	1
4	100	+0, -1	+0, -2	+1.6, -0	10-12	250-300	3	5	2
5-8	125-200	+0, -1	+0, -2	+1.6, -0	14-16	350-400	3	6	2
10-18	250-450	+0, -2	+0, -2	+3.2, -0	18-24	450-600	4	10	-
20-24	500-600	+0, -2	+0, -2	+3.2, -0	26-30	650-750	5	10	-
26-30	650-750	-	-	-	32-34	800-1050	5	13	-
32-48	800-1200	-	-	-	44-48	1100-1200	5	19	-

备注:1. 端部内径和公称壁厚由制造商指定。
2. 圆度为正偏差和负偏差绝对值之和。
3. 当需要直径壁厚以满足2.2条的设计要求时, 在成型管配件的颈部, 该项公差可超过表列值。
4. 除非采购方另有要求, 这些公差适用于公称内径等于公称外径或两倍公称壁厚的场合。

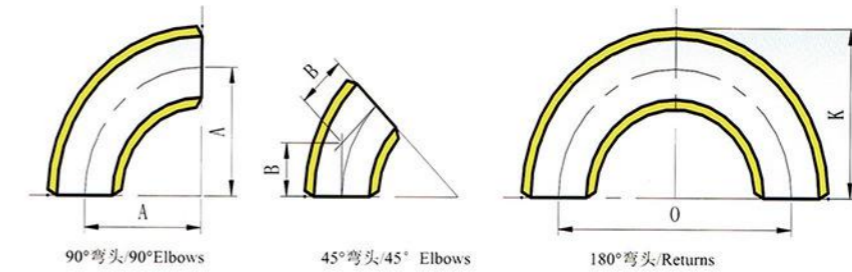
Notes:1.The inside diameter and the nominal wall thicknesses at ends are to be specified by the purchaser.
2.Out-of-round is the sum of absolute values of plus and minus tolerances.
3.This tolerance may not apply in localized areas of formed fittings where increased wall thickness is required to meet design requirements.
4.Unless otherwise specified by the purchaser, these tolerances apply to the nominal inside diameter, which equals the difference between the nominal outside diameter and twice the nominal wall thickness.

表2 焊接坡口和钝边/ Table 2 Welding Bevels and Root Face 尺寸为毫米/All Dimensions are in millimeters

公称壁厚/Nominal Wall Thickness, t	端部准备/End Preparation
小于x/Less than x	直角或轻微倒角, 由制造商定。Cut square or slightly chamfer, at manufacturer's option (not illustrated)
t=x-22/x to 22, inclusive	简单坡口, 由简图所示。Plain bevel as in illustration (a) above
大于22/More than 22	组合坡口, 如简图所示。Compound bevel as in illustration (b) above

备注:对碳钢或铁素体合金钢x=5, 对奥氏体合金钢x=3。
Notes:x=5 for carbon steel or ferritic alloy steel and 3 for austenitic alloy steel.

弯头尺寸表-GB/T 12459-2005, GB/T 13401-2005 Dimensions of Elbows



单位为毫米/All dimensions are in millimeters.

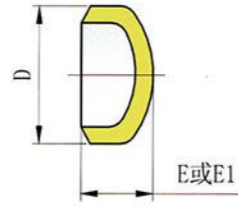
公称尺寸 Diameter Nominal DN	坡口处外径D Outside Diameter at Bevel, D		中心至端面/Center-to-End				180°弯头>Returns				
	I系列 Series I	II系列 Series II	90°弯头A 90°Elbows-A		45°弯头B 45°Elbows-B		中心至中心O Center-to-Center-O		背部至端面/Back-to-face-K		
			长半径 L.R.	短半径 S.R.	长半径 L.R.	短半径 S.R.	长半径 L.R.	短半径 S.R.	长半径 L.R.	短半径 S.R.	
15	21.3	18	38	-	16	76	-	48	-	47	-
20	26.9	25	38	-	19	76	-	51	-	51	-
25	33.7	32	38	25	22	76	51	56	41	54	41
32	42.4	38	48	32	25	95	64	70	52	67	51
40	48.3	45	57	38	29	114	76	83	62	80	61
50	60.3	57	76	51	35	152	102	106	81	105	79
65	73.0	76	95	64	44	190	127	132	100	133	102
80	88.9	89	114	76	51	229	152	159	121	159	121
90	101.6	-	133	89	57	267	178	184	140	-	-
100	114.3	108	152	102	64	305	203	210	159	206	156
125	141.3	133	190	127	79	381	254	262	197	257	194
150	168.3	159	229	152	95	457	305	313	287	308	232
200	219.1	219	305	203	127	610	406	414	313	414	313
250	273	273	381	254	159	762	508	518	391	518	391
300	323.9	325	457	305	190	914	610	619	467	620	467
350	355.6	377	533	356	222	1067	711	711	533	722	544
400	406.4	426	610	406	254	1219	813	813	610	823	619
450	457	480	686	457	286	1372	914	914	686	925	697
500	508	530	762	508	318	1524	1016	1016	762	1026	773
550	559	-	838	559	343	1676	1118	1118	838	-	-
600	610	630	914	610	381	1829	1219	1219	914	1229	925
650	660	-	991	-	406	-	-	-	-	-	-
700	711	720	1067	-	438	-	-	-	-	-	-
750	762	-	1143	-	470	-	-	-	-	-	-
800	813	820	1219	-	502	-	-	-	-	-	-
850	864	-	1295	-	533	-	-	-	-	-	-
900	914	920	1372	-	565	-	-	-	-	-	-
950	965	-	1448	-	600	-	-	-	-	-	-
1000	1016	1020	1524	-	632	-	-	-	-	-	-
1050	1067	-	1600	-	660	-	-	-	-	-	-
1100	1118	1120	1676	-	695	-	-	-	-	-	-
1150	1168	-	1753	-	727	-	-	-	-	-	-
1200	1219	1220	1829	-	759	-	-	-	-	-	-

注:1.GB/T 12459-2005 尺寸范围为DN15-DN800,GB/T 13401-2005 尺寸范围为DN350-DN1200。
2.DN20管件, 由制造商自定, O和K的值可分别为57mm和43mm。
Notes: 1.GB/T 12459-2005 dimensions range is DN15-DN800, GB/T 13401-2005 dimensions range is DN350-DN1200.
2.O and K dimensions of 57 mm and 43 mm, respectively, may be furnished for DN 20 at the manufacturer's option.

技术标准
Technical standards

技术标准
Technical standards

管帽尺寸表-GB/T 12459-2005, GB/T13401-2005 Dimensions of caps



单位为毫米/All dimensions are in millimeters.

公称直径 Nominal Diameter DN	坡口处外径 Outside Diameter of Bevel		长度 Length E	长度E时极限壁厚 Limiting Wall Thickness For Length,E	长度 Length E1
	I系列/Series I	II系列/Series II			
15	21.3	18	25	4.57	25
20	26.9	25	25	3.81	25
25	33.7	32	38	4.57	38
32	42.4	38	38	4.83	38
40	48.3	45	38	5.08	38
50	60.3	57	38	5.59	44
65	73	76	38	7.11	51
80	88.9	89	51	7.62	64
90	101.6		64	8.13	76
100	114.3	108	64	8.64	76
125	141.3	133	76	9.65	89
150	168.3	159	89	10.92	102
200	219.1	219	102	12.7	127
250	273	273	127	12.7	152
300	323.9	325	152	12.7	178
350	355.6	377	165	12.7	191
400	406.4	426	178	12.7	203
450	457	480	203	12.7	229
500	508	530	229	12.7	254
550	559		254	12.7	254
600	610	630	267	12.7	305
650	660		267		
700	711	720	267		
750	762		267		
800	813	820	267		
850	864		267		
900	914	920	267		
950	965		305		
1000	1016	1020	305		
1050	1067		305		
1100	1118	1120	343		
1150	1168		343		
1200	1219	1220	343		

注: 1 管帽的形状应为椭圆形, 并应符合相应国家标准或行业标准中给定的形状要求。
2 长度E适用于不超过“长度E时极限壁厚”栏中所列的场合。
3 DN600及其以下的管帽, 长度E1适用于厚度大于“长度E时极限壁厚”栏中所列的场合。

Notes: 1. The shape of these caps shall be ellipsoidal and shall conform to the requirements given in the National standard and Industrial standard.
2. Length E applies for thickness not exceeding that given in column "Limiting Wall Thickness for Length, E."
3. Length E1 applies for thickness greater than that given in column "Limiting Wall Thickness" for DN600 and smaller.

坡口及公差-GB/T 12459-2005, GB/T13401-2005 End Preparation & Tolerances

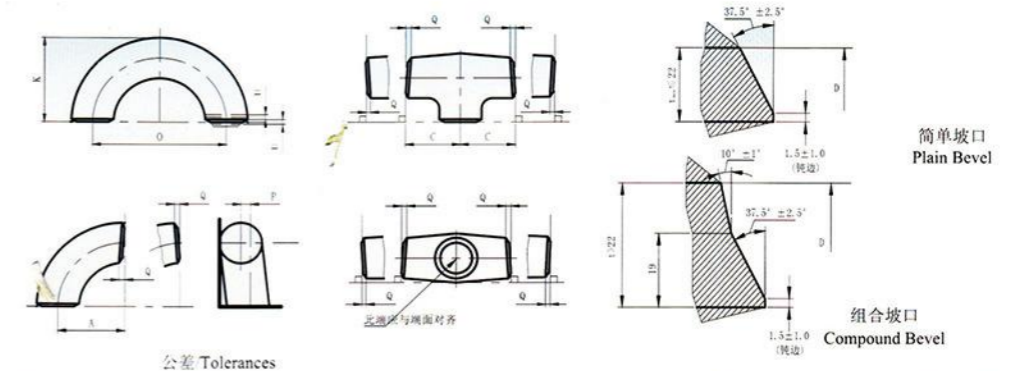


表1 公差表 Table 1 Tolerances

单位为毫米/All Dimensions are in millimeters

公称直径 Nominal Diameter DN	所有管件/All Fittings			壁厚 Wall Thickness t	90°和45°弯头及三通 90°and 45° Long and Short Radius Elbows and Tees A,B,C,M	异径管和搭接管 Overall Length of Reducers and Lap joint stub ends,F,H	管帽总长 Overall Length of Caps E	180°弯头>Returns	
	坡口处外径 Outside Diameter at Bevel, D	坡口处内径 Inside Diameter at Bevel	中心至中心 Center-to-Center Dimensions O					背部至端面 Back-to-Face Dimensions K	
15-65	+1.6, -0.8	0.8		不小于公称壁厚的87.5%, Not Less Than 87.5% of Nominal Thickness	2	2	3	6	6
80-90	1.6	1.6			2	2	3	6	6
100	1.6	1.6			2	2	3	6	6
125-200	+2.4, -1.6	1.6			2	2	6	6	6
250-450	+4.0, -3.2	3.2			2	2	6	10	6
500-600	+6.4, -4.8	4.8			2	2	6	10	6
650-750	+6.4, -4.8	4.8			3	5	10	-	-
800-1200	+6.4, -4.8	4.8			5	5	10	-	-

公称直径 Nominal Diameter DN	搭接接管端部/Lap Joint Stub Ends			公称直径 Nominal Diameter DN	角度公差/Angularity Tolerances		
	搭接边外径 Outside Diameter of Lap, G	搭接边倒角半径 Fillet Radius of Laps, R	搭接边厚度 Lap Thickness		Off Angle, Q	Off Plane, P	Alignment of ends, U
15-65	+0, -1	+0, -1	+1.6, -0	15-100	1	2	1
80-90	+0, -1	+0, -1	+1.6, -0	125-200	2	4	1
100	+0, -1	+0, -2	+1.6, -0	250-300	3	5	2
125-200	+0, -1	+0, -2	+1.6, -0	350-400	3	6	2
250-450	+0, -2	+0, -2	+3.2, -0	450-600	4	10	2
500-600	+0, -2	+0, -2	+3.2, -0	650-750	5	10	-
650-750	-	-	-	800-950	5	13	-
800-1200	-	-	-	1000-1200	5	19	-

备注: 1 端部内径和公称壁厚由制造商指定。
2 圆度为正偏差和负偏差绝对值之和。
3 当需要直径壁厚以满足2.2条的设计要求时, 在成型管配件的颈部, 该项公差可超过表列值。
4 除非采购方另有要求, 这些公差适用于公称内径等于公称外径减两倍公称壁厚的场合。

Notes: 1. The inside diameter and the nominal wall thicknesses at ends are to be specified by the purchaser.
2. Out-of-round is the sum of absolute values of plus and minus tolerances.
3. This tolerance may not apply in localized areas of formed fittings where increased wall thickness is required to meet design requirements of para. 2.2.
4. Unless otherwise specified by the purchaser, these tolerances apply to the nominal inside diameter, which equals the difference between the nominal outside diameter and twice the nominal wall thickness.

表2 焊接坡口和钝边/ Table 2 Welding Bevels and Root Face

单位为毫米/All Dimensions are in millimeters

公称壁厚/Nominal Wall Thickness, t	端部准备/End Preparation
小于x/Less than x	直角或轻微倒角, 由制造商定。Cut square or slightly chamfer, at manufacturer's option (not illustrated)
t=x-22/x to 22, inclusive	简单坡口, 由简图所示。Plain bevel as in illustration (a) above
大于22/More than 22	组合坡口, 如简图所示。Compound bevel as in illustration (b) above

备注: 对碳钢或铁素体合金钢x=5, 对奥氏体合金钢x=3。
Notes: x=5 for carbon steel or ferritic alloy steel and 3 for austenitic alloy steel.