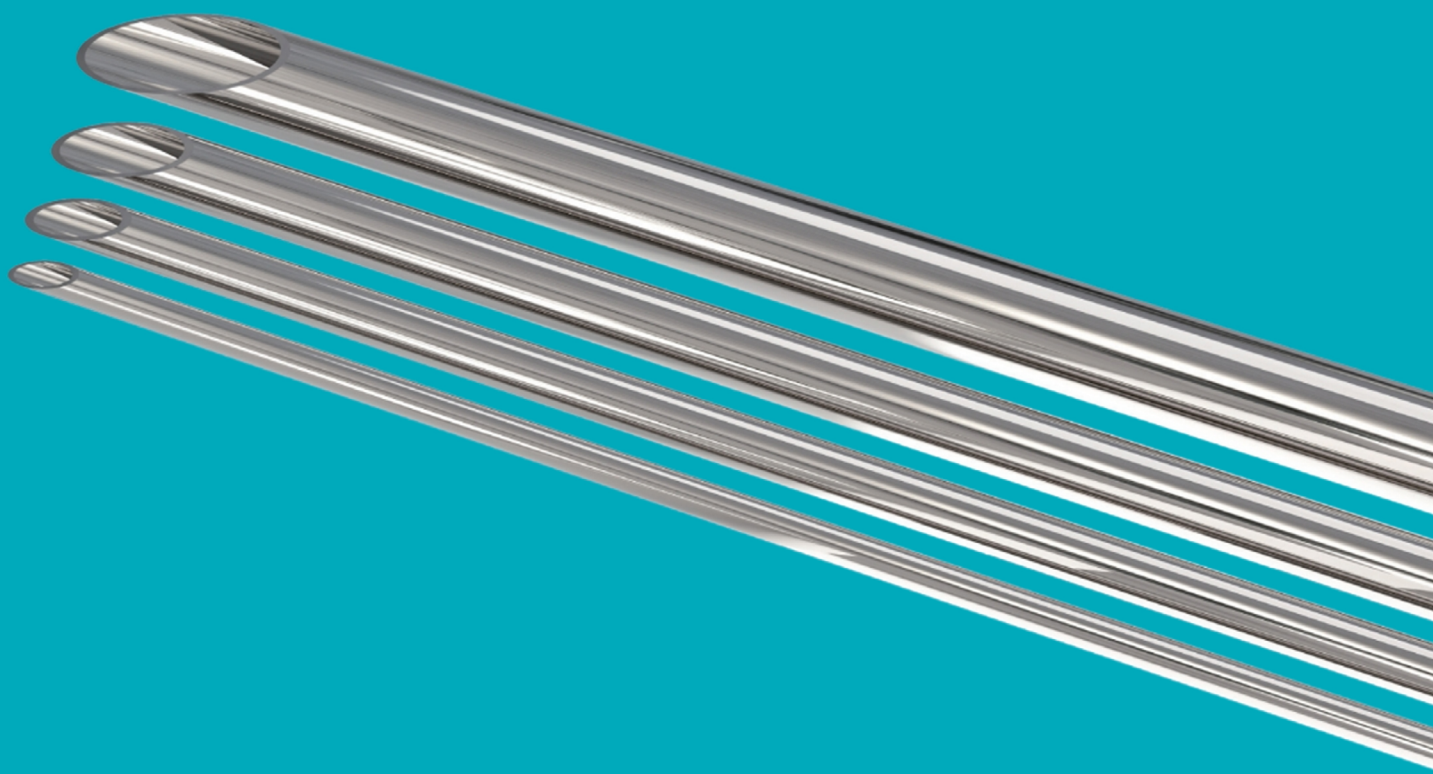


08 *Pipe & Tube*

不锈钢管



不锈钢管系列

1/8"- 6"外径304、316/316L不锈钢ASTM A213/A269

Stainless Steel Pipe Series

Outer diameter ranging from 1/8" to 6",
made of 304 and 316/316L stainless steel, compliant with ASTM A213/A269.

> 不锈钢管PIPE & TUBE

航天和半导体流体超洁净管

SIEMTECH SUPER CLEAN PIPE & TUBE

以最先进的EP工艺，生产超高纯度管道用于半导体和航天设备。

With state of the art EP technology, produces ultra high purity pipe & tube used in semiconductor & aerospace applications.

无缝清洁管道

SEAMLESS CLEAN PIPES

BA- 我们的特别冷加工，最佳传递时间表和光亮退火提供了非常好并且光亮平滑和良好的防腐功能。

BA-Our special cold working,optimum pass schedule and bright-annealing give very fine and lustrous smoothness and good anticorrosion.

EP- 精密电解抛光，平滑和耐腐蚀表面、防腐。

EP - Precision electropolishing bright , smooth and corrosion resistant surface anticorrosion.

清洁管道焊接

WELDED CLEAN PIPES

提供了一个大范围管道焊接的成本效益

Provides a wide range of cost effective welded pipes.

材质 MATERIALS

SUS 316L VOD 或 SUS 316L VIM+VAR用来满足半导体和航天工业的迫切需要。

SUS 316L VOD or SUS 316L VIM+VAR

is used to meet the stringent requirements of the semiconductor and aerospace industries.

我们工业先进的管道防止气体和提高防腐性，同时提供基于专业的气体和技术的良好兼容性。

Our state-of-the-art Pipe & Tube prevent out gassing and improve corrosion

resistance while providing excellent

compatibility with speciality gases and chemicals

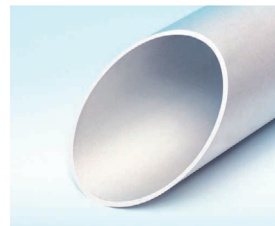
等级 GRADE

AP - Annealed and Pickled Pipe 酸洗管

MP - Mechanically Polished Pipe 机械研磨管

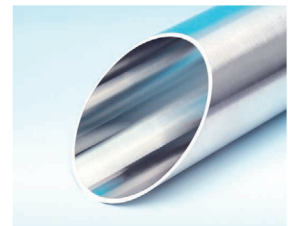
BA - Bright Annealed Pipe 光辉退火管

EP - ElectroPolished Pipe 电解抛光管



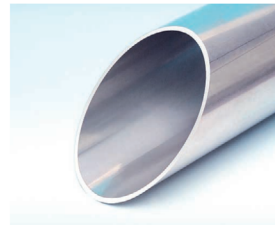
AP Grade AP等级

Annealed and Pickled Pipe 酸洗管



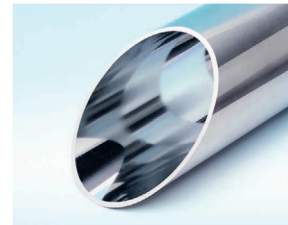
MP Grade MP等级

Mechanically Polished Pipe 机械研磨管



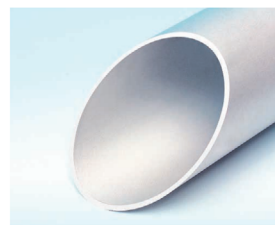
BA Grade BA等级

Bright Annealed Pipe 光辉退火管



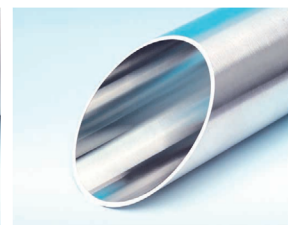
EP Grade EP等级

Electro Polished Pipe 电解抛光管



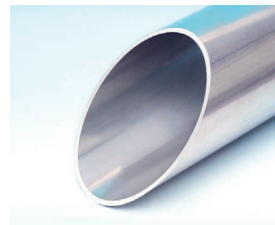
AP Grade AP等级

Weled
Material :
SUS 304/316
SUS 316L



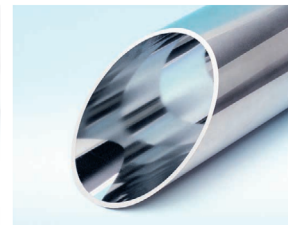
MP Grade MP等级

Weled
Material :
SUS 304/316
SUS 316L



BA Grade BA等级

Seamless
Material :
SUS316L Single Material(VOD)
SUS316L Double Material(VIM+VAR)



EP Grade EP等级

Seamless
Material :
SUS316L Single Material(VOD)
SUS316L Double Material(VIM+VAR)

电解抛光管提高表面粗糙程度通过选择性解决表面方案。
Electropolishing improves surface roughness by selective solution of surface

> 不锈钢管PIPE & TUBE

质量标准 QUALITY STANDARD

Grade	Particle Counting	Oil Content
AP	Particles larger than 0.30um are less than 5	≤ 1.0mg/m2
MP	Particles larger than 0.10um are less than 5	≤ 0.1mg/m2
BA	Particles larger than 0.10um are less than 5	≤ 0.1mg/m2
EP	Particles larger than 0.10um are less than 1	≤ 0.1mg/m2

洗脱离子分析 ELUTION ION ANALYSIS

+ION/ -ION				
Elution ion	NA+	K+	NH4+	Mg2+
Measurement (+)	N/D	N/D	N/D	N/D

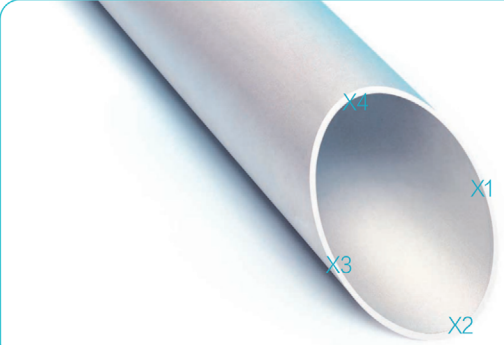
内表面粗糙度 CHEMICAL COMPOSITION STANDARD

Grade	Size(øOD)	Ra(unich)	Ry(max):um
AP	ALL	≤100	≤25
MP	139.8 ≤ OD ≤ 355.6	≤20	≤4.0
BA	6.35 ≤ OD ≤ 48.6	≤15	≤3.0
BA	48.6 < OD ≤ 165.2	≤20	≤4.0
EP	6.35 ≤ OD ≤ 48.6	≤10	≤0.5
EP	48.6 < OD ≤ 165.2	≤10	≤0.7

拉伸测试 TENSILE TEST

Grade	Materials	Standard	Yield Strength(N/mm2)	TensileStrength(N/mm2)	Elongation(%)
AP/BA/EP/MP	SUS304TP	JIS	Min 205	Min 520	Min 35
AP/BA/EP/MP	SUS304TP	sample	248	589	52
AP/BA/EP/MP	SUS316TP	JIS	Min 205	Min 520	Min 35
AP/BA/EP/MP	SUS316TP	sample	251	562	51
AP/BA/EP/MP	SUS316LTP	JIS	Min 175	Min 480	Min 35
AP/BA/EP/MP	SUS316LTP	sample	587	587	62

拉伸测试 TENSILE TEST

					
Measuring Point	X1	X2	X3	X4	Average
Measurement	168	172	165	162	167

X : Measuring Points
HV 0.5

化学成份标准 CHEMICAL COMPOSITION STANDARD

Grade	Chemical Composition(Wt%)	C	Si	Mn	P	S	Ni	Cr	Mo
AP / MP	Standard Composition 316 / 316L ASTM Dual Material	≤ 0.08	≤ 1.00	≤ 2.00	≤ 0.045	≤ 0.03	10.0~14.0	16.0~18.0	2.00~3.00
AP / MP	Standard Composition 304 Material	≤ 0.08	≤ 1.00	≤ 2.00	≤ 0.04	≤ 0.03	8.0~11.0	18.0~20.0	-
BA / EP	316L Double Material (VIM + VAR)	≤ 0.01	≤ 0.30	≤ 0.40	≤ 0.03	≤ 0.003	14.5~15.0	16.5~17.0	2.20~2.50
BA / EP	316L Single Material (VOD)	≤ 0.03	≤ 1.00	≤ 2.00	≤ 0.04	≤ 0.03	12.0~16.0	16.0~18.0	2.00~3.00

▶ 不锈钢管PIPE & TUBE

管道尺寸 / 尺寸公差 PIPE & TUBE SIZE / DIMENSION TOLERANCE

Pipe Size (A)	Tube Size (Inch)	Out Diameter			Wall Thickness						
		mm	Grade		T	5S	10S	Grade			
			MP / BA / EP	AP				MP	BA	EP	AP
-	1/4"	6.35	+0.05mm (-0.00mm)	±0.3mm	1.00	-	-	±10.0%	±10.0%	±10.0%	±0.2mm
-	3/8"	9.53	+0.05mm (-0.00mm)	±0.3mm	1.00	-	-	±10.0%	±10.0%	±10.0%	±0.2mm
-	1/2"	12.7	+0.05mm (-0.00mm)	±0.3mm	1.24	-	-	±10.0%	±10.0%	±10.0%	±0.2mm
-	3/4"	19.05	+0.05mm (-0.00mm)	±0.3mm	1.65	-	-	±10.0%	±10.0%	±10.0%	±0.2mm
-	1"	25.4	±0.08mm	±0.3mm	1.65	-	-	±10.0%	±10.0%	±10.0%	±0.2mm / ※ ±10.0%
8A	-	13.8	±0.10mm	±0.3mm	-	1.20	1.65	±10.0%	±10.0%	±10.0%	±0.2mm / ※ ±10.0%
10A	-	17.3	±0.10mm	±0.3mm	-	1.20	1.65	±10.0%	±10.0%	±10.0%	±0.2mm / ※ ±10.0%
15A	-	21.7	±0.10mm	±0.3mm	-	1.65	※2.1	±10.0%	±10.0%	±10.0%	±0.2mm / ※ ±10.0%
20A	-	27.2	±0.10mm	±0.3mm	-	1.65	※2.1	±10.0%	±10.0%	±10.0%	±0.2mm / ※ ±10.0%
25A	-	34	±0.10mm	±1.0%	-	1.65	※2.8	±10.0%	±10.0%	±10.0%	±0.2mm / ※ ±10.0%
32A	-	42.7	±0.30mm	±1.0%	-	1.65	※2.8	±10.0%	±10.0%	±10.0%	±0.2mm / ※ ±10.0%
40A	-	48.6	±0.30mm	±1.0%	-	1.65	※2.8	±10.0%	±10.0%	±10.0%	±0.2mm / ※ ±10.0%
50A	-	60.5	±0.50mm	±1.0%	-	1.65	※2.8	±10.0%	±10.0%	±10.0%	±0.2mm / ※ ±10.0%
65A	-	76.3	±0.50mm	±1.0%	-	2.10	3.00	±10.0%	±10.0%	±10.0%	±10.0%
80A	-	89.1	±0.50mm	±1.0%	-	2.10	3.00	±10.0%	±10.0%	±10.0%	±10.0%
100A	-	114.3	±1.00mm	±1.0%	-	2.10	3.00	±10.0%	±10.0%	±10.0%	±10.0%
125A	-	139.8	±1.0%	±1.0%	-	2.80	3.40	±10.0%	±10.0%	±10.0%	±10.0%
150A	-	165.2	±1.0%	±1.0%	-	2.80	3.40	±10.0%	±10.0%	±10.0%	±10.0%
200A	-	216.3	±1.0%	±1.0%	-	2.80	4.00	±10.0%	±10.0%	±10.0%	±10.0%
250A	-	267.4	±1.0%	±1.0%	-	3.40	4.00	±10.0%	±10.0%	±10.0%	±10.0%
300A	-	318.5	±1.0%	±1.0%	-	4.00	4.50	±10.0%	±10.0%	±10.0%	±10.0%
350A	-	355.6	±0.5%	±0.5%	-	4.00	5.00	±12.5%	±12.5%	±12.5%	±10.0%
400A	-	406.4	±0.5%	±0.5%	-	4.00	5.00	±12.5%	±12.5%	±12.5%	±10.0%

管道尺寸 PIPE SIZE

PIPE SIZE	OUTER DIAMETER OD(mm)	THICKNESS		LENGTH
		T=5S	T=10S	
8A	13.80	1.20	1.65	4M (6M)
10A	17.30	1.20	1.65	4M (6M)
15A	21.70	1.65	2.10	4M (6M)
20A	27.20	1.65	2.10	4M (6M)
25A	34.00	1.65	2.80	4M (6M)
32A	42.70	1.65	2.80	4M (6M)
40A	48.60	1.65	2.80	4M (6M)
50A	60.50	1.65	2.80	4M (6M)
65A	76.30	2.10	3.00	4M (6M)
80A	89.10	2.10	3.00	4M (6M)
100A	114.30	2.10	3.00	4M
125A	139.80	2.80	3.40	4M
150A	165.20	2.80	3.40	4M
200A	216.30	2.80	4.00	4M

管道尺寸 TUBE SIZE

PIPE SIZE	OUTER DIAMETER OD(mm)	THICKNESS T	LENGTH L
1/4"	6.35	1.0 (0.89)	4M (6M)
3/8"	9.53	1.0 (0.89)	4M (6M)
1/2"	12.70	1.0, 1.24 (1.65)	4M (6M)
3/4"	19.05	1.65 (1.24)	4M (6M)
1"	25.40	1.65 (1.24)	4M (6M)
1 1/4"	31.80	1.65	4M (6M)
1 1/2"	38.10	1.65	4M (6M)
2"	50.80	1.65	4M (6M)
2 1/2"	63.50	1.65	4M (6M)
3"	76.20	1.65	4M (6M)
4"	101.60	2.11	4M (6M)
5"	127.00	2.77 (3.05)	4M (6M)
6"	152.40	2.77 (3.05)	4M (6M)