



Material Grade

TP304/0018N1/4301; TP 304L/00C19N10/1.4301; TP 316/0C17N12Mo2/1.4401; TP 316L/00C17N14Mo2/1.4404; TP 321/1C18N10Ti/1.4541; TP 347/0C18N11Nb/1.4971; UNS 31603/00C19N10/1.4401; TP 310S/0C25Ni20/1.4328; TP 316Ti/0C18N12Mo2Ti/1.4571;

Specification

O.D.6-406mm  
W.T:1-25mm  
Length:1m-18m

Standard

GB/T14976.2002; GB12996-2007; GB5310-2008; GB9848-2006; GB/T21833-2008; ASME/ASTM A312; ASME/ASTM A213; ASME/ASTM A209; JIS5463; JIS3448; DIN2462; DIN17468; DIN17466; BS EN 10216-5-2004

common chinese standard material grade and chemical composition

常用中国标准不锈钢管牌号及化学成分

标准号	牌号	C	Si	Mn	P	S	Ni	Cr	Mo	Ti	N	Nb	Cu
GB/T14976-2002	0C18N9	≤0.07	≤1.00	≤2.00	0.035≤	≤0.030	8.00-11.00	17.00-19.00					
	1C18N9	≤0.12	≤1.00	≤2.00	0.035≤	≤0.030	8.00-10.00	17.00-19.00					
	00C19N10	≤0.030	≤1.00	≤2.00	0.035≤	≤0.030	8.00-12.00	18.00-20.00					
	1C18N9Ti	≤0.12	≤1.00	≤2.00	0.035≤	≤0.030	8.00-11.00	17.00-19.00		5(C-0.02)-0.80			
	0C18N10Ti	≤0.08	≤1.00	≤2.00	0.035≤	≤0.030	9.00-12.00	17.00-19.00		≥5C -			
	0C17N12Mo2	≤0.08	≤1.00	≤2.00	0.035≤	≤0.030	10.00-14.00	16.00-18.80	2.00-3.00				
	00C17N14Mo2	≤0.030	≤1.00	≤2.00	0.035≤	≤0.030	12.00-15.00	16.00-18.00	2.00-3.00				
	0C18N12Mo2Ti	≤0.080	≤1.00	≤2.00	0.035≤	≤0.030	11.00-14.00	16.00-19.00	1.80-2.50		5C-0.7		
	0C25Ni20	≤0.08	≤1.00	≤2.00	0.035≤	≤0.030	19.00-22.00	24.00-26.00					
	0C18N11Nb	≤0.08	≤1.00	≤2.00	0.035≤	≤0.030	9.00-13.00	17.00-19.00				≥10C	
GB13296-2007	0C18N9	≤0.07	≤1.00	≤2.00	0.035≤	≤0.030	8.00-11.00	17.00-19.00					
	00C19N10	≤0.030	≤1.00	≤2.00	0.035≤	≤0.030	8.00-12.00	18.00-20.00					
	1C18N9Ti	≤0.12	≤1.00	≤2.00	0.035≤	≤0.030	8.00-11.00	17.00-19.00		5(C-0.02)-0.80			
	0C18N10Ti	≤0.08	≤1.00	≤2.00	0.035≤	≤0.030	9.00-12.00	17.00-19.00		≥5C -			
	0C17N12Mo2	≤0.08	≤1.00	≤2.00	0.035≤	≤0.030	11.00-14.00	16.00-18.00	2.00-3.00				
	00C17N14Mo2	≤0.030	≤1.00	≤2.00	0.035≤	≤0.030	12.00-15.00	16.00-18.00	2.00-3.00				
	0C18N12Mo2Ti	≤0.080	≤1.00	≤2.00	0.035≤	≤0.030	11.00-14.00	16.00-19.00	1.80-2.50		5C-0.7		
	0C25Ni20	≤0.080	≤1.00	≤2.00	0.035≤	≤0.030	19.00-22.00	24.00-26.00					
	0C18N11Nb	≤0.08	≤1.00	≤2.00	0.035≤	≤0.030	9.00-13.00	17.00-19.00				Nb+Ta 9C-1.00	
	02C22Ni5Mo3N	≤0.030	1.40-2.00	1.20-2.00	0.030≤	≤0.030	4.20-5.20	18.00-19.00	2.50-3.00		0.05-0.10		
GB5310-2008	07C18N9Nb	0.04-0.10	≤0.76	≤2.00	0.030≤	≤0.015	8.00-13.00	17.00-19.00				8C-1.10	≤0.25
GB9948-2006	1C19N11Nb	0.04-0.10	≤1.00	≤2.00	0.030≤	≤0.020	9.00-13.00	17.00-20.00					≤0.20

标准号	牌号	C	Si	Mn	P	S	Ni	Cr	Mo	Ti	N	Nb	Cu
ASME/ASTM A213/A213M-08a	TP304	≤0.08	≤1.00	≤2.00	≤0.045	≤0.030	8.00-11.00	18.00-20.00					
	TP304H	0.04-0.10	≤1.00	≤2.00	≤0.045	≤0.030	8.00-11.00	18.00-20.00					
	TP304L	≤0.035	≤1.00	≤2.00	≤0.045	≤0.030	8.00-12.00	18.00-20.00					
	TP321H	0.04-0.10	≤1.00	≤2.00	≤0.045	≤0.030	9.00-12.00	17.00-19.00			4(C+N)-0.7		
	TP321	≤0.08	≤1.00	≤2.00	≤0.045	≤0.030	9.00-12.00	17.00-19.00			5(C+N)-0.7		
	TP316	≤0.08	≤1.00	≤2.00	≤0.045	≤0.030	10.00-14.00	16.00-18.00	2.00-3.00				
	TP316L	≤0.035	≤1.00	≤2.00	≤0.045	≤0.030	10.00-14.00	16.00-18.00	2.00-3.00				
	TP316Ti	≤0.080	≤0.75	≤2.00	≤0.045	≤0.030	10.00-14.00	16.00-18.00	2.00-3.00		5(C+N)-0.7	≤0.1	
	TP310S	≤0.08	≤1.00	≤2.00	≤0.045	≤0.030	19.00-22.00	24.00-26.00					
	TP347	≤0.08	≤1.00	≤2.00	≤0.045	≤0.030	9.00-13.00	17.00-20.00					10C-1.10
TP347H	0.04-0.10	≤1.00	≤2.00	≤0.045	≤0.030	9.00-13.00	17.00-19.00					8C-1.10	
ASME/ASTM A312/A312M-09	TP304	≤0.08	≤1.00	≤2.00	≤0.045	≤0.030	8.00-11.00	18.00-20.00					
	TP304H	0.04-0.10	≤1.00	≤2.00	≤0.045	≤0.030	8.00-11.00	18.00-20.00					
	TP304L	≤0.035	≤1.00	≤2.00	≤0.045	≤0.030	8.00-13.00	18.00-20.00					
	TP321H	0.04-0.10	≤1.00	≤2.00	≤0.045	≤0.030	9.00-12.00	17.00-19.00			4C-0.8	≤0.1	
	TP321	≤0.08	≤1.00	≤2.00	≤0.045	≤0.030	9.00-12.00	17.00-19.00			5C-0.7	≤0.1	
	TP316	≤0.08	≤1.00	≤2.00	≤0.045	≤0.030	10.00-14.00	16.00-18.00	2.00-3.00				
	TP316L	≤0.035	≤1.00	≤2.00	≤0.045	≤0.030	10.00-14.00	16.00-18.00	2.00-3.00				
	TP316Ti	≤0.080	≤0.75	≤2.00	≤0.045	≤0.030	10.00-14.00	16.00-18.00	2.00-3.00		5(C+N)-0.7	≤0.1	
	TP310S	≤0.08	≤1.00	≤2.00	≤0.045	≤0.030	19.00-22.00	24.00-26.00	≤0.75				
	TP347	≤0.08	≤1.00	≤2.00	≤0.045	≤0.030	9.00-13.00	17.00-19.00					10C-1.0
TP347H	0.04-0.10	≤1.00	≤2.00	≤0.045	≤0.030	9.00-13.00	17.00-19.00					8C-1.0	
ASME/ASTM A790/A790M-08a	S31803	≤0.03	≤1.00	≤2.00	≤0.030	≤0.020	4.50-6.50	21.00-23.00	2.5-3.5		0.08-0.20		

标准号	C	Si	Mn	P	S	Ni	Cr	Mo	Ti	N	Nb	Cu
BS EN 10216-5-2004	1.4301	≤0.07	≤1.00	≤2.00	≤0.040	≤0.015	8.00-10.00	17.00-19.00				≤0.11
	1.4306	≤0.030	≤1.00	≤2.00	≤0.040	≤0.015	10.00-12.00	18.00-20.00				0.12-0.22
	1.4307	≤0.030	≤1.00	≤2.00	≤0.040	≤0.015	8.00-10.00	17.00-19.00				≤0.11
	1.4541	≤0.08	≤1.00	≤2.00	≤0.040	≤0.015	9.00-12.00	17.00-19.00			5(C+N)-0.7	
	1.4401	≤0.07	≤1.00	≤2.00	≤0.040	≤0.015	10.00-13.00	16.50-18.50	2.00-2.50			≤0.11
	1.4404	≤0.030	≤1.00	≤2.00	≤0.040	≤0.015	10.00-13.00	16.50-18.50	2.00-2.50			≤0.11
	1.4571	≤0.080	≤0.75	≤2.00	≤0.040	≤0.015	10.50-13.50	16.50-18.50	2.00-2.50			5C-0.7
	1.4335	≤0.02	≤0.25	≤2.00	≤0.025	≤0.015	20.00-22.00	24.00-26.00				≤0.11
	1.4912	0.04-0.10	≤1.00	≤2.00	≤0.040	≤0.015	9.00-12.00	17.00-19.00				≤0.11
	1.4462	≤0.030	≤1.00	≤2.00	≤0.035	≤0.015	4.500-6.50	21.00-23.00	2.50-3.50			0.10-0.22