

Comparison of domestic and foreign standards for stainless steel seamless steel pipes (1)

project	standard	GB13296-2007		GB/T14976-2002		ASTM A213/A213M-09a		ASTM A312/A312M-09a		JIS G3463-2006	
Steel grade		0Cr18Ni9 00Cr19Ni10 0Cr25Ni20 0Cr17Ni12Mo2 00Cr17Ni14Mo3	1Cr18Ni9Ti 0Cr18Nu10Ti 0Cr18Ni12Mo2Ti 00Cr17Ni14Mo2 0Cr18Ni11Nb	0Cr18Ni9 00Cr19Ni10 0Cr25Ni20 0Cr17Ni12Mo2 00Cr17Ni14Mo3	1Cr18Ni9Ti 0Cr18Nu10Ti 0Cr18Ni12Mo2Ti 00Cr17Ni14Mo2 0Cr18Ni11Nb	TP304 TP316 TP310S TP321 TP347H	TP304L TP316L TP317L TP316Ti TP321H	TP304 TP316 TP310S TP321 TP347H	TP304L TP316L TP317L TP316Ti TP321H	SUS304TB SUS316TB SUS310STB SUS321TB SUS347HTB	SUS304LTB SUS316LTB SUS317LTB SUS316TiTB SUS321HTB
tensile strength ^{8b} (Mpa) Tensile strength 6b		ultra lowC≥480 low, highC≥520		Same as left		ultra lowC≥485 low, highC≥515		Same as left		Same as left	
Yield Strength(MPa) Yield strength 60.2		ultra lowC≥175 low, highC≥205		Same as left		ultra lowC≥170 low, highC≥205		Same as left		Same as left	
ElongationS5(%)		highC, containsMo2ultra low04I φb≥35		≥35		≥35		Same as left		≥27~35	
hardness		(optional)据需方要求, 对S ≥ 2,可选 HRB≤90or HBW ≤ 187 or HV ≤ 200				HRB ≤ 90 or HBW ≤ 187 or HV ≤ 200		Same as left			
Granularity								Same as left		Same as left	
Rattening test (mm)		S≤10mm H=1.09t/(0.09+t/D)		(选做)据需方要求 ,Ss10mm H=1.09t/(0.09+t/D)		每批钢管取一支 两端各取 一只试样 H=1.09/(0.09+t/D)		每一炉批取5%试样 (不少于2根)H=1.09/(0.09+t/D)		H=1.09/(0.09+t/D)	
Expanding test		S ≤ 10mm α=60°扩 18%		(选做)据需方要求 ,S≤10mm α =30°or45°or60°扩 10%		每批钢管取一支, 两端各取一只试样,α=60° d: D 0.9 扩 15% 0.8 扩 17% 0.7 扩 19% 0.6 扩 23% 0.5 扩 28% 0.4 扩 38% 0.3 扩 50%				α=60° 扩20%	
Crystal corrosbn test		GB4334.E		GB4334.E 对D ≤35mm、 S≥5 mm协议		A262 A262E法(补充要求)		A262 A262E法(补充要求)		JIS G0575(特味要求)	
Hydraulic test(MPa)		P=2SR/D 式中R=S 0.2/2 Pmax=20Mpa 或涡流 GB/T7735B级		P=2SR/D, 式中 R=0.4Sb Pmax=20Mpa or ET GB/T7735 A 级 orUTGBAB777L4 级		P=220.6VDor无损探伤代 替, 用户可指定		P=21R/D 式中 R=50%\$0.2 or无损探伤 代替, 用户可指定		P=2tfVD 式中 R=0.6 50.2 无损探伤代替	
Nondestructive flaw detection		GB/T5777 L2级		(选做)需方要求, GB/T5777 L3级		ASTM E213 E309 E426		ASTM E213 E309 E426		可选涡流超声探伤 涡流 JISG0583 EV 超声JIS G0582 UD	
length		L:0~ 10mm		Lt :0~20mm b:0-10mm b:0~5mm		D < 50.8 :0~ 3mm D > 50.8 :0~5mm		0-6mm		D < 50 :0~7mm D > 50 :0~10mm	
Curvature(mm/m) Bending		≤1.5mm/m		L ≤0.15%Lmm S≤15mm ≤1.5mm/m S > 15mm ≤2.0mm/m		quite straight		quite straight		quite straight	
Out-of-roundness and uneven wall thickness		≤80%		≤80%		D≤25.4 圆度≤0.5 mm D > 25.4 圆度≤2%D mm					
other request		incision hair removal		incision hair removal		incision hair removal		incision hair removal		incision hair removal	