

## Comparison of domestic and foreign standards for stainless steel seamless steel pipes (2)

project	standard	GB 5310-2008		GB 9948-2006		ASTM A269/A269M-08		ASTM A511/A511M-08		JIS G3459-2004	
Steel grade	07Cr19Ni10 07Cr18Ni11Nb	07Cr19Ni11Ti	1Cr19Ni9	1Cr19Ni11Nb	TP304 TP316 TP321	TP304L TP316L	MT304 MT316 MT321	MT304L MT316L	SUS304TB SUS316TB SUS310STB SUS321TB SUS347HTB	SUS304LTB SUS316LTB SUS317LTB SUS316TiTB SUS321HTB	
抗拉强度8b(Mpa) Tensile strength 6 b	≥515 only Nb≥520		≥520				(选做) ≥517		超低C≥480 低、高C≥520		
屈服强度(MPa) Yield strength 6 0.2	≥205		≥205				(选做) ≥207		超低C≥175 低、高C≥205		
Elongation S5(%)	≥35		≥35				≥35		≥27~35		
Elongation	对S ≥ 5,应HRB≤90 Of HBW ≤187 对S<5,应HRB≤90 据需 方要求,可选HV≤200				HRB ≤ 90 or HBW ≤ 187 or HV ≤ 200		(选做) 据需方要求'可选 HRB≤90 or HBW≤187		(选做) HRB≤90		
Granularity	4~7级				仅含H≤7级				仅含H≤7级		
Rattening test (mm)	对 D>22~400mm, S.S≤ 40mm H=1.09t/(0.09+t/D)		对D> 22-400mm, H=1.09t/(0.09+t/D)						H=1.09/(0.09+t/D)		
Expanding test	(选做)据需方要求, 对D≤76 mm且S≤10mm, 用α=60°扩 d:D≤0.6 扩12% >0.6-0.8 扩15% >0.8 扩20%		对D≤76mm且S≤8mm, 用α=60°扩 d:D≤0.6 扩12% >0.6-0.8 扩15% >0.8 扩20%		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				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=0.78b Pmax=20Mpa or ET GB/T7735 A 级		P=220.6VDor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		GB/T5777 L2级				ASTM E213 E309 E426		可选涡流超声探伤 涡流 JISG0583 EV 超声JIS G0582 UD		
length	L:0~ 15mm		L≤6000mm :0~10mm L > 6000mm:0~15mm		D ≤38.1 :0~ 3.2mm D>38.1~355.6 :0~4.8mm		0-6mm				
Curvature(mm/m) Bending	S≤15mm ≤1.5mm/m S > 15~30mm ≤2.0mm/m S > 30mm ≤3.0mm/m		S≤15mm ≤1.5mm/m S > 15~30mm ≤2.0mm/m S > 30mm or D≥351mm ≤3.0mm/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		