

Comparison of domestic and foreign standards for stainless steel seamless steel pipes (3)

project	standard	EN 10297-2:2005	GB/T 21833-2008	ASTM A789/A789M-08a	ASTM A270/A270M-03a	GB/T3089-2008		
Steel grade		1.4301 1.4307 1.4401 1.4404 1.4541 1.4571 1.4462 1.4550	022cR22Ni5Mo3N 022Cr22Ni5Mo3N 022Cr25Ni7Mo4N	S31803	S32205	TP304 TP316 S31803	TP304L TP316L S32205	06Cr19Ni10 022Cr19Ni10 022Cr17Ni12Mo2 06Cr18Ni11Ti 06Cr17Ni12Mo2Ti
抗拉强度8b(Mpa) Tensile strength 6 b		≥500 ≥460 ≥510 ≥490 ≥500 ≥500 ≥640 ≥510	≥620 ≥655 ≥800	≥620 ≥655	(选做) 超低C≥485 低C≥515	超低C≥440 超低C含Mo≥480 低C≥520 低C含Mo≥540		
屈服强度(MPa) Yield strength 6 0.2		≥195 ≥180 ≥205 ≥190 ≥200 ≥210 ≥450 ≥205	≥450 ≥485 ≥550	≥450 ≥480	(选做) 超低C≥170 低C≥205			
ElongationS5(%)		≥40 ≥40 ≥40 ≥40 ≥35 ≥35 ≥22 ≥35	≥25 ≥25 ≥15	≥25	(选做) ≥35	超低C≥40 高C≥35		
hardness			对S≥1.7, 应HRC≤30、30、32 or HBW≤290、290/300	HRC≤30 or HBW≤290	(选做) ≥90			
Granularity			A:40~60%	仅含H≤7级		仅含H≤7级		
Rattening test (mm)		对D>22~400mm, S≤40mm H=1.09t/(0.09+t/D)	S≤10mm, H=1.09t/(0.09+t/D)		(选做) H=1.09t/(0.09+t/D)			
Expanding test			对D≤150mm且S≤10mm, 用α=60°扩10%	α=60°,扩10%				
Crystal corrosion test		EN 3651-2A	(选做) 据需方要求, GB4334.E		ASTM A262E法(补充要求)			
Hydraulic test(MPa)		P=2SR/D 式中S=0.7 Rp0.2 Pmax=70bar	P=2SR/D, 式中R=0.5 Rp0.2 Pmax=20Mpa	P=220.6t/D or 无损探伤代替, 用户可指定	P=220.6t/D or 无损探伤代替, 用户可指定			
Nondestructive Flaw detection		ET EN 10246-3 or UT EN 10246-7			(选做) ASTM E213 E309 E426			
length		L≤6000mm :0~5mm 6000 < L≤12000mm:0~10mm	L:0-6mm	D ≤38.1 :0~3.0mm D>38.1~203.2 :0~5.0mm	0-50.8mm	0-10mm		
Curvature(mm/m) Bending		≤0.0020Lmm/m	S≤15mm ≤1.5mm/m S>15~30mm ≤2.0mm/m S>30mm or D≥351mm ≤3.0mm/m	quite straight	quite straight	D≤32.4mm ≤5.0mm/m		
Out-of-roundness and uneven wall thickness			≤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		