

# Duplex Stainless Steel Pipe Specification

Standard Item	ASTM A789		ASTM A790		EN 10216-5	
Grade	S31803 S32205 S32750		S31803 S32205 S32750		1.4301 1.4307 1.4948 1.4315 1.4401 1.4404 1.4571 1.4541 1.4941 1.4845 1.4449 1.4438 1.4550 1.4912 1.4462 1.4410	
Yield Strength (Mpa)	≥450 ; ≥485 ; ≥550		≥450 ; ≥450 ; ≥550		---	
Tensile Strength (Mpa)	≥620 ; ≥655 ; ≥800		≥620 ; ≥655 ; ≥800		---	
Elongation(%)	≥25 ; ≥25 ; ≥15		≥25 ; ≥25 ; ≥15		---	
Hydrostatic Test	The Hydrostatic Test shall be in accordance with ASTM A1016. Could be replaced by ECT.		The Hydrostatic Test shall be in accordance with ASTM A999. Could be replaced by ECT.		The hydrostatic test shall be carried out at a test pressure of 7MPa or at a test pressure calculated using the following formula $P=2St/D$ $S=70\%R_{p0.2}$	
IC Test	Usually use Pitting Corrosion Test.		Usually use Pitting Corrosion Test.		EN ISO 3651-2 (Optional)	
Eddy Current Test	Could be replaced by HT.		Could be replaced by HT.		EN 10246-3	
O.D. Tolerance (mm)	O.D.	O.D.Tolerance	O.D.	O.D.Tolerance	O.D. Tolerance Class	
	D<12.7	+/-0.13	10.3≤D≤48.3	+0.40/-0.80	D3	+/-0.75% or +/-0.3mm
	12.7≤D<38.1	+/-0.13	48.3<D≤114.3	+0.80/-0.80	whichever is the greater	
	38.1≤D<88.9	+/-0.25	114.3<D≤219.1	+1.60/-0.80	D4	+/-0.5% or +/-0.1mm
	88.9≤D<139.7	+/-0.38	219.1<D≤457.0	+2.40/-0.80	whichever is the greater	
W.T. Tolerance (mm)	O.D.	W.T.Tolerance	O.D.	W.T.Tolerance	W.T. Tolerance Class	
	D<12.7	+/-15%	10.3≤D≤73.0	+20.0%/-12.5%	T3	+/-10% or +/-0.2mm
	12.7≤D<38.1	+/-10%	88.9≤D≤457.0 t/D ≤5%	+22.5%/-12.5%	whichever is the greater	
	38.1≤D<88.9	+/-10%	88.9≤D≤457.0 t/D >5%	+15.0%/-12.5%	T4	+/-7.5% or +/-0.15mm
	88.9≤D<139.7	+/-10%			whichever is the greater	