

TOLERANCE ON OUTSIDE DIAMETER, WALL THICKNESS, WEIGHT AND LENGTH OF PIPE

SPEC.	TYPE	OUTSIDE DIAMETER		WALL THICKNESS	WEIGHT	LENGTH																																															
		PIPE BODY	PIPE ENDS (PLAIN END)			NOMINAL		AVG(min)		MINIMUM		MAXIMUM																																									
						ft.	Mtr	ft.	Mtr	ft.	Mtr	ft.	Mtr																																								
API 5L	E, S	< 2 3/8" (60.3 mm) OD : + 0.40mm, - 0.80mm ≥ 2 3/8" (60.3 mm) OD to ≤ 24" (610 mm) : ± 0.0075 D but max. of ± 3.20 mm for welded pipe	≤ 6 5/8" (168.3 mm): + 1.60mm, - 0.40mm > 6 5/8" (168.3 mm) to ≤ 24" (610 mm) : ± 0.005 D (but max. of ± 1.6 mm)	Seamless : ≤ 4.0 mm WT: + 0.6 mm, - 0.5 mm > 4.0 mm WT to < 25.0 mm WT : + 0.15t, - 0.125t ≥ 25.0 mm WT : + 3.7 or + 0.1t (whichever is greater) - 3.0 or 0.1t (whichever is greater) ERW ≤ 5.0 mm WT : ± 0.5 mm > 5.0 mm WT to < 15.0 mm WT : ± 0.1t ≥ 15.0 mm WT : ± 1.5 mm	Single Length of Pipe : + 10%, - 3.5% Carloads ≥ 20 Ton : - 1.75%	20	6	17.5	5.33	9	2.74	22.5	6.86																																								
						40	12	35.0	10.67	14	4.27	45.0	13.72																																								
API 5CT	E, S	< 4.1/2" (114.3 mm) OD : ± 0.031" (0.79mm) ≥ 4 1/2" (114.3mm) OD : + 1% D, - 0.5% D	N.A	+ Not Limited -12.5%	Single Length : + 6.5%, - 3.50% Carloads ≥ 40,000 lbs (18,144 kg) : - 1.75% Carloads < 40,000 lbs (18,144 kg) : - 3.5%	<table border="0"> <tr> <td></td> <td></td> <td></td> <td></td> <td>Range-1</td> <td>Range-2</td> <td>Range-3</td> <td></td> <td></td> <td></td> </tr> <tr> <td>CASING</td> <td>16-25</td> <td>(4.88-7.62)</td> <td>25-34</td> <td>(7.62-10.36)</td> <td>34-48</td> <td>(10.36-14.6)</td> <td>(feet)</td> <td></td> <td></td> </tr> <tr> <td>TUBING</td> <td>20-24</td> <td>(6.10-7.32)</td> <td>28-32</td> <td>(8.53-9.75)</td> <td>38-42</td> <td>(11.58-12.8)</td> <td>(feet)</td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>(mtr)</td> <td></td> <td></td> </tr> </table> <p>Pup Joints 2,3,4,6,8,10 & 12 Ft. Tolerance = ± 3"</p>												Range-1	Range-2	Range-3				CASING	16-25	(4.88-7.62)	25-34	(7.62-10.36)	34-48	(10.36-14.6)	(feet)			TUBING	20-24	(6.10-7.32)	28-32	(8.53-9.75)	38-42	(11.58-12.8)	(feet)										(mtr)		
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CASING	16-25	(4.88-7.62)	25-34	(7.62-10.36)	34-48	(10.36-14.6)	(feet)																																														
TUBING	20-24	(6.10-7.32)	28-32	(8.53-9.75)	38-42	(11.58-12.8)	(feet)																																														
							(mtr)																																														
IS: 1978	E, S	48.3 and less : + 0.40 mm, - 0.80mm 60.3 and above : ± 1%	≤ 273.1mm O.D. : +1.60mm, - 0.40mm 323.9 mm O.D and larger pipe : + 2.40 mm, -0.80 mm	< 73mm O.D. : +20%, -12.5% 88.9 mm O.D. : +18%, -12.5% Seamless : 101.6mm O.D. & larger : +15%, -12.5% Welded : 101.6 to 457.2 mm : +15%, -12.5 % Welded : 508.0 mm & larger : + 17.5%, -10%	Single length pipe : + 10%, - 3.5% Carloads - for min 18000Kg : - 1.75%	-	6	-	5.3	-	2.7	-	-																																								
						-	12	-	10.7	-	4.3	-	-																																								
IS : 1979	E, S	< 508.0 mm O.D.: ± 0.75 % 508.0 mm O.D. & larger : ± 1.0 %	≤ 273.1mm O.D. : +1.60mm, - 0.40mm 323.9 mm O.D and larger pipe : + 2.40 mm, -0.80 mm	Upto 457.0 mm O.D. : +15%, - 12.5% Welded : 508.0mm & larger : +19.5%, - 8% Seamless : +17.5%, -10%	Single length of pipe : + 10%, - 3.5%	-	6	-	5.3	-	2.7	-	-																																								
						-	12	-	10.7	-	4.3	-	-																																								
IS:1239 Pt-I BS:1387	E, S	As per Table of relevant specification	N.A	Light : + not limited, - 8%, Medium & Heavy : + not limited, - 10% Note : For IS:1239 Seamless Pipes, Tol. Shall be - 12.5%, + not limited	Carload 10 MT Light : ± 5% 10 MT, Med. & Heavy : ± 7.5% Single Tube Light : +10%, - 8% Med & Heavy : ± 10%	-	6	-	-	-	4	-	7																																								
						Tolerance- Exact Length : + 6 mm, - 0 Approx Length : ± 150 mm																																															
IS : 3589	E, S	Upto 508 mm O.D.: Welded : ± 0.75% Seamless : ± 1.0%	N.A	Welded : ± 10% Seamless : + 20%, -12.5%,	Carload 10 MT & above : ± 7.5%																																																
IS : 4270	E, S	± 1.0%	N.A	Welded - Upto 406.4mm O.D. : + 15%, -12.5% Above 406.4mm O.D. : +15% , -10% Seamless : + 20%, -12.5%	+ 10%, - 8%	-	6	-	-	-	4	-	7																																								
IS : 1161	E, S	Upto 48.3mm O.D. : + 0.40mm, - 0.80 mm Over 48.3mm : ± 1.0%	N.A	Welded : + not limited, - 10% , Seamless : + Not Limited, - 12.5%	Carload 10 MT Light : ± 5% 10 MT, Med. & Heavy : ± 7.5% Single Tube Light : +10% , - 8% Med & Heavy : ± 10%	-	6	-	-	-	4	-	7																																								
						Tolerance- Exact Length as agreed / random 4 to 7 mtrs.																																															
IS:1914 Pt-2,3&4	E, S	Welded & CFS : + 0, -1% HFS : ≤ 63mm O.D.: +0.40 mm, - 0.80 mm HFS : > 63mm O.D.: ±1.0%	N.A	Welded & CFS : +10%, -5% HFS ≤ 63mm O.D. : + 17.5%, -7.5% HFS > 63 mm O.D. : + 15%, - 5%	N.A	Tolerance Upto 9 Mtr, + 3 mm, - 0 Above 9 mtr, + 6 mm, - 0																																															
IS:2416 Pt-II,III&IV	E, S	Welded : ± 0.75% (±0.30mm min) HFS : ≤ 63mm O.D.: +0.40 mm,- 0.80 mm HFS : > 63mm O.D. : ±1.0%	N.A	Welded : +10% , -5% HFS : +17.5%, - 7.5% , CFS : + 10%, - 5%	N.A	Tolerance Upto 9 Mtr, + 3 mm, - 0 Above 9 mtr, + 6 mm, - 0																																															

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		PIPE BODY	PIPE ENDS (PLAIN END)			NOMINAL		AVG(min)		MINIMUM		MAXIMUM	
						ft.	Mtr	ft.	Mtr	ft.	Mtr	ft.	Mtr
IS:11714 Pt-2&3	E,S	As per Table of relevant specification	N.A	Welded : +18%, - 0 Seamless : As per table of relevant specification	+ 10%, - 0	Tolerance - Below 50 mm O.D. : + 3.2 mm , - 0 50 mm O.D. & above : + 4.8 mm , - 0							
BS:3059 Pt I	E,S	Welded : ± 0.75% (± 0.30 mm min) HFS : ± 1% (± 0.50 mm min) CFS : ± 0.5% (± 0.10 mm. Min)	N.A	Welded : Upto 3.25 mm WT, ± 10% Over 3.25 mm WT, ± 7.5% HFS : ± 12.5% CFS : ± 7.5%	N.A	Tolerance - Upto 6Mtr : + 6 mm, - 0 Above 6 mtr, 1.5 mm will increase for every 3 mtrs increase of (12 mm max.)							
BS:3059 Pt II	E,S	± 0.75% (± 0.30 mm min) - Class 2	N.A.	± 10% (excluding weld area) - Class 2	N.A.								
BS:6323 Pt V	E,S	As per Table of relevant specification	N.A	Less than 3 mm WT : ± 10% 3 mm WT & above : ± 8%	N.A	Tolerance Upto 0.5 mtr : + 2 mm, - 0 above 0.5 to 2.0 mtr : +3 mm, - 0 above 2.0 to 5.0 mtr. : + 5 mm, - 0 above 5.0 to 7.0 mtr. : + 10 mm, - 0 above 7.0 mtr. : as agreed							
ASTM A-53	E,S	1-1/2" NPS & under : ± 0.40 mm 2" NPS and over : ± 1.0%	N.A	At any point : - 12.5% (max)	±10%	20	6	-	-	16	4.88	22	6.71
						40	12	35	10.67	22	6.71	-	-
ASTM A106	S	1/8" to 1-1/2" : ± 0.40 mm, > 1-1/2" TO 4" : ± 0.80 mm Above 4" to 8" : + 1.60 mm, - 0.80 mm Above 8" to 18" : + 2.40 mm, - 0.80 mm	N.A	At any point : - 12.5% (max.)	Single Length of Pipe + 10%, - 3.5%	20	6	-	-	16	4.88	22	6.71
						40	12	35	10.67	22	6.71	-	-
ASTM A-179	S	Hot Finished Seamless Tubes 4"(101.6mm & under) : +0.40mm, -0.80mm Above 4" to 7 1/2" including :+0.40mm, -1.20mm	N.A	HFS Tubes O.D. ≤101.6mm & WT < 2.4mm : +40%, - 0 WT 2.4 to 3.80mm incl. : + 35%, - 0	HFS : + 16%, - 0	Exact Length Tolerance : H.F.S. Tubes : + 5mm, - 0							
A-192	S	(101.6 to 190.5 mm) Over 7 1/2" to 9" : + 0.40, - 1.60 mm		WT 3.80 mm to 4.60 mm incl. : + 33%, - 0 WT > 4.60 mm : + 28%, - 0									
A-209	S	(190.50 to 228.60 mm) Welded and cold finished											
A-210	S	seamless tubes < 1" (25.4 mm) : ± 0.10 mm											
A-213	S	1" (25.4mm) to 1-1/2" (38.1mm) Incl. : ± 0.15 mm > 1-1/2"(38.1mm) to 2" (50.8mm) excl. : ± 0.20mm E 2" (50.8mm) to 2-1/2" (63.5mm) excl. : ± 0.25mm 2-1/2" (63.5mm) to 3" (76.2mm) excl. : ± 0.30mm	N.A.	Welded Tubes (for all sizes) :+ 18%, - 0 CFS Tubes : < 1.1/2" O.D. : + 20%, - 0 > 1.1/2" OD : + 22%, - 0	Welded : +10%, - 0 CFS Tubes : < 1-1/2" O.D. : + 12%, - 0 > 1-1/2"O.D. : + 13%, - 0	Welded & C.F.S Tubes : < 2" (50.8 mm) O.D. : + 3 mm, - 0 > 2" (50.8mm) O.D. : + 5 mm, - 0							
A-214	E	3" (76.2mm) to 4" (101.6mm) incl. : ± 0.38mm > 4"(101.6mm) to 7-1/2"(190.5mm) incl.:+ 0.38mm, - 0.64mm											
A-334	E,S	> 7 1/2"(190.5mm) to 9"(228.6 mm) incl. : +0.38mm, -1.14mm											
ASTM A-335	S	1/8" to 1-1/2" : ± 0.40 mm, > 1-1/2" to 4" : ± 0.79 mm > 4" to 8" incl. : +1.59 mm, - 0.79 mm 8" to 12" : + 2.38 mm, - 0.79 mm Over 12" : ± 1.0% of OD	N.A	At any point : - 12.5% (max.)	Single pipe NPS 12 & under : + 10%, - 3.5%	Specified Length : + 6 mm, - 0							

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		PIPE BODY	PIPE ENDS (PLAIN END)			NOMINAL		AVG(min)		MINIMUM		MAXIMUM			
						ft.	Mtr	ft.	Mtr	ft.	Mtr	ft.	Mtr		
ASTM A-333	E, S	1/8" to 1-1/2" incl. : + 0.40 mm, - 0.80 mm >1-1/2" to 4" incl. : ± 0.80 mm > 4" to 8" incl. : + 1.60 mm, - 0.80 mm >8" to 18" incl. : + 2.40 mm, - 0.80 mm > 18" to 26" incl. : + 3.20 mm, - 0.80 mm	N.A	At any point : - 12.5% (max.)	Single pipe NPS 12 & under : + 10%, - 3.5% Single pipe over NPS 12 : + 10%, - 5%	20	6	-	-	16	4.88	22	6.71		
						40	12	35	10.67	22	6.71	-	-	Specified Length : + 6 mm, - 0	
ASTM A-519	S	Upto 76.17 mm : ± 0.51 mm 76.20 to 114.27 mm : ± 0.64 mm 114.30 to 152.37 mm : ± 0.79 mm 152.4 to 190.47 mm : ± 0.94 mm 190.50 to 228.57 mm : ± 1.14 mm 228.6 to 273.05 mm : ± 1.27 mm	Not Specified	Outside Diameter Upto 76.19 mm : ± 12.5% 76.2 to 152.37 mm : ± 10% 152.4 to 273.05 mm : ± 10% Wall Thickness < 15 mm : ≥ 15 mm ≥ 15 mm : ± 10% ± 7.5% ± 10%	Not specified	Pipe Length < 1.20 mtr 1.20 - 3.0 mtr 3.0 - 7.3 mtr > 7.30 mtr	OD ≤ 50.8 mm > 50.8 - 101.6 mm > 101.6 mm	≤ 50.8 mm > 50.8 mm	All Sizes	Tolerance + 1.6 mm, - 0 + 2.4 mm, - 0 + 3.2 mm, - 0 + 2.4 mm, - 0 + 3.2 mm, - 0 + 4.8 mm, - 0 + 4.8 mm, - 12.7 mm for each 3.0 mtr					
ASTM A-589	E & S	For NPS 1 1/2" & under : ± 0.40 mm NPS 2 & above : ± 1% of OD	Not Specified	At any point : - 12.5% (max.)	± 5%	Single Random Length : For Drive, Reamed & Drifted and Water Well Casing Pipe : 4.9 - 6.7 mtrs Random Length : For Driven Well Pipe : 0.9 to 1.8 mtrs or 1.8 - 3.0 mtrs, as specified									
RDSO ETI / OHE/ 11(5/89)	E, S	33.7mm O.D. : + 0.80 mm, - 1.0mm 38.0 mm O.D. : + 0.32mm, - 0.2 mm 49.0 mm O.D. : + 0.32 mm, - 0.2mm	28.4 (Std. ID) & 27.70 (Min ID) 29.9 (Std. ID) & 29.58 (Min ID) 40.9 (Std. ID) & 40.58 (Min ID)	- 0.31 mm, + not limited - 0.35mm, + not limited - 0.35mm, + not limited	N.A	Tolerance - As agreed									
DIN 1629 and DIN 1630	S	≤ 100 mm OD : ± 1% of OD (0.5 mm max) > 100 mm OD : ± 1% of OD	≤ 100 mm OD : ± 0.40 mm > 100 mm OD ≤ 200 mm : ± 0.5% > 200 mm OD : ± 0.6%	OD ≤ 130 mm : WT ≤ 2.0 mm : +15%, -10% WT > 2.0 mm ≤ 4.0 mm : + 12.5%, -10% WT > 4.0 mm : ± 9% OD > 130 mm ≤ 320 mm : WT ≤ 0.05 D : + 17.5%, - 12.5% WT > 0.05 D ≤ 0.11 D : ± 12.5% WT > 0.11D : ± 10.0% OD > 320 mm ≤ 660 mm : WT ≤ 0.05 D : + 20%, - 15% WT > 0.05 D ≤ 0.09 D : + 15%, - 12.5% WT > 0.09 D : + 12.5%, - 10%	Single Length of Pipe : + 12%, - 8% For Car load not less than 10 Ton : + 10%, - 5%	Specified length : ± 500 mm Exact Length : Upto 6 Mtr : + 10 mm, - 0 6 - 12 mtrs : + 15 mm, - 0 Above 12 mtr : As agreed									
DIN 2391	S	As per Table of relevant specification	Not specified	± 10%	Not Specified	Random length : 4 - 7 mtrs. Exact Length : Upto 500 mm : + 2mm, - 0 500 - 2000 mm : + 3mm, - 0 Above 2000 - 5000 mm : + 5 mm, - 0 Above 5000 - 7000 mm : + 10 mm, - 0									
DIN 17175	S	OD ≤ 100 mm : ± 0.75% (± 0.5 mm min) OD > 100 mm ≤ 320 mm : ± 0.9% OD > 320 mm : ± 1.0%	OD ≥ 45 mm ≤ 100 mm : ± 0.40mm OD > 100 mm ≤ 200 mm : ± 0.5% OD > 200 mm : ± 0.6%	OD ≤ 130 mm : WT ≤ 2.0 mm : +15%, -10% WT > 2.0 mm ≤ 4.0 mm : + 12.5%, -10% WT > 4.0 mm : ± 9% OD > 130 mm ≤ 320 mm : WT ≤ 0.05 D : + 17.5%, - 12.5% WT > 0.05 D ≤ 0.11 D : ± 12.5% WT > 0.11D : ± 10.0% OD > 320 mm ≤ 660 mm : WT ≤ 0.05 D : + 22.5%, - 12.5% WT > 0.05 D ≤ 0.09 D : + 15%, - 12.5% WT > 0.09 D : + 12.5%, - 10%	Single Length of Tube : + 10%, - 8% For Car load of min. 10 tons : + 10%, - 5%	Random Length : ± 500 mm Exact Length : Upto 6 Mtr : + 10 mm, - 0 6 - 12 mtrs : + 15 mm, - 0 Above 12 mtr : As agreed									

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