

ALLOWANCE FOR MACHINING

**Carbon and Alloy Seamless Mechanical Tubing
Maximum Depth Limit of Surface
Imperfections O.D. and I.D.**

The following table shows the permissible depth of surface imperfections. Determination should be made by measuring the actual diameter or wall thickness at the place of the imperfection, filling it out, and remeasuring.

Specified O.D.	H.R.	C.D.	Specified O.D.	H.R.	C.D.
1.499	—	.010	6.500/6.999	.050	.040
1.500/1.999	—	.013	7.000/7.499	.055	.043
2.000/2.499	.023	.015	7.500/7.999	.060	.045
2.500/2.999	.025	.018	8.000/8.499	.065	.050
3.000/3.499	.028	.020	8.500/8.999	.070	.055
3.500/3.999	.030	.023	9.000/9.499	.075	.060
4.000/4.499	.033	.025	9.500/9.999	.080	.065
4.500/4.999	.035	.028	10.000/10.499	.085	.070
5.000/5.499	.038	.030	10.500/10.750	.090	.075
5.500/5.999	.040	.035	10.751/11.000	.090	—
6.000/6.499	.045	.038			

ALLOWANCE FOR MACHINING

Mandrel Drawn ERW Mechanical Tubing

Finished OD inch	Finished Wall Thickness, Inch				
	.187 and OVER				
	Under	.230 Incl.	.360 Incl.	.460 Incl.	.580 Incl.
Up to 1.500 Incl.	.015	.020	.025	.025	
Over 1.500 to 3.000 Incl.	.020	.025	.030	.030	
Over 3.000 to 4.750 Incl.	.025	.030	.035	.035	.040
Over 4.750 to 6.000 Incl.	.030	.035	.040	.040	.045
Over 6.000 to 7.000 Incl.	.035	.040	.045	.045	.050
Over 7.000 to 8.000 Incl.	.035	.043	.048	.048	.053
Over 8.000 to 10.500 Incl.	.035	.045	.050	.050	.055
Over 10.500 to 12.500 Incl.		.045	.055	.055	.060
Over 12.500 to 14.000 Incl.		.045	.055	.055	.060
Over 14.000 to 15.000 Incl.	.045	.055	.055	.060	

Camber: For every 12" of fraction thereof over 12", and .010" for camber. For sizes over 7¹/₂" O.D. add .020" for camber. Allowances are based on conventional chucking procedures.

ALLOWANCE FOR MACHINING

**Removal of Surface Imperfections of Mandrel Drawn
ERW Mechanical Tubing/Outside-By Centerless Grinding**

Finished OD Inch	Finished Wall Thickness, Inch					
	.125 and OVER					
	Under	.180 Incl.	.230 Incl.	.360 Incl.	.460 Incl.	.580 Incl.
Up to 3.000 Incl.	.012	.014	.016	.020	.022	
Over 3.000 to 4.750 Incl.	.016	.018	.020	.022	.024	.026
Over 4.750 to 6.000 Incl.	.018	.020	.022	.024	.026	.028
Over 6.000 to 7.000 Incl.	.020	.022	.024	.026	.028	.030
Over 7.000 to 8.000 Incl.		.024	.026	.027	.029	.031
Over 8.000 to 10.500 Incl.			.026	.028	.030	.032
Over 10.500 to 12.500 Incl.			.028	.030	.032	.034
Over 12.500 to 14.000 Incl.			.030	.032	.034	.036
Over 14.000 to 15.000 Incl.			.033	.035	.036	.037