



PMC LONE STAR



Gages, Calibration & Instruments

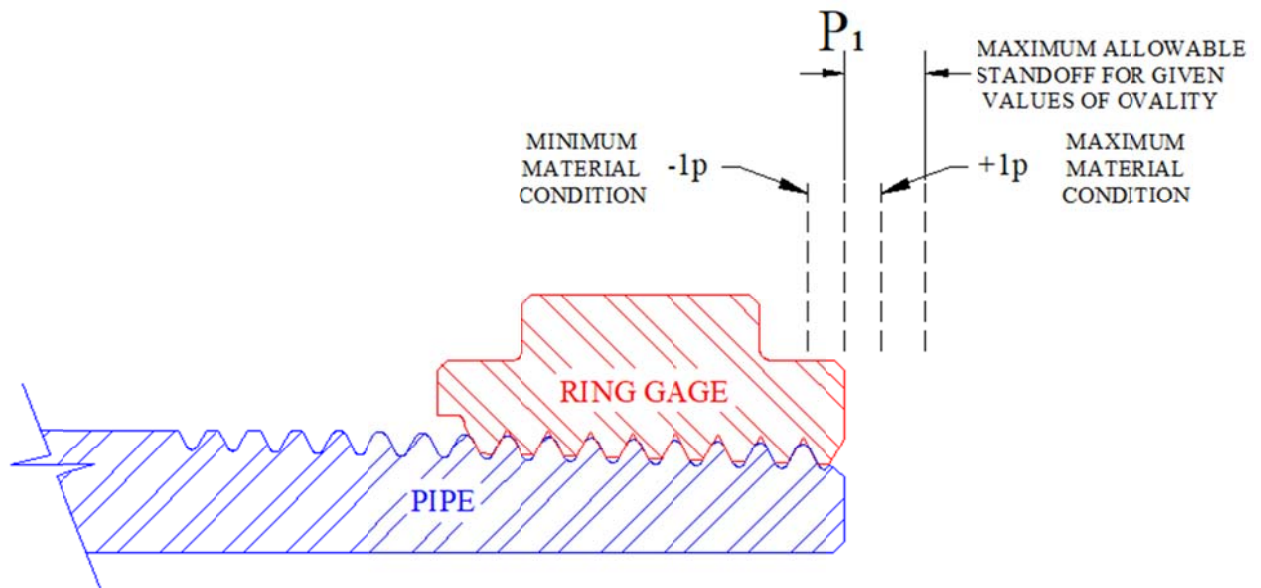
8 Round Tubing Ring Gage Adjusted Standoff for Ovality of Pipe

PMC Lone Star Technical Brief Doc. 107 Rev. A

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API Specification 5B 16th edition has added new requirements for inspecting ovality of 8 Round Tubing pipe using crest diameter gages such as the CDRP. The addition of crest diameter inspection to the specification changes the allowable standoff of ring gages used to inspect pipe for functional size. The presence of ovality in a pipe will cause the ring gage to standoff further. The revised specification acknowledges this effect on standoff and provides guidance on allowable standoff variation based on the amount of ovality present. The ovality standoff allowance is added to the maximum standoff as prescribed within the specification, the minimum standoff remains unchanged.





8 Round Tubing

The basic standoff of a Ring Gage to an 8 Round Tubing Pipe is $P_1 \pm 1p$

$P_1 = 0.000$ (nominal), actual P_1 from Ring Gage certification should be used

$p = 0.125$ for all 8 Round Tubing

Min Standoff = $P_1 - 1p = -0.125$

Max Standoff = $P_1 + 1p + \text{Ovality Standoff Allowance}$

Max Standoff = $0.125 + \text{Ovality Standoff Allowance}$

8 Round Tubing Pin Standoff			
Thread Ovality (in.)	Ovality Standoff Allowance (in.)	Min Ring Gage Standoff $P_1 - 1p$ (in.)	Max Ring Gage Standoff $P_1 + 1p + \text{Ovality Standoff Allowance}$ (in.)
0.001	0.008	-0.125	0.133
0.002	0.016	-0.125	0.141
0.003	0.024	-0.125	0.149
0.004	0.032	-0.125	0.157
0.005	0.040	-0.125	0.165
0.006	0.048	-0.125	0.173
0.007	0.056	-0.125	0.181
0.008	0.064	-0.125	0.189
0.009	0.072	-0.125	0.197
0.010	0.080	-0.125	0.205
0.011	0.088	-0.125	0.213
0.012	0.096	-0.125	0.221
0.013	0.104	-0.125	0.229
0.014	0.112	-0.125	0.237