



# Inside Battery Limits Man-Hour Report:

Installation / Benchmark Man-hours for "Process" related Carbon Steel Pipe from recently completed Refinery / LNG / Chemical Projects located in US Gulf Coast (Texas):

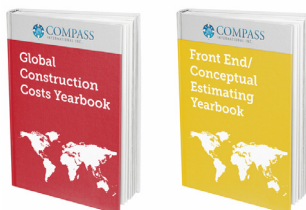
Inside Battery Limits (ISBL) A-53 Carbon Steel Pipe Fabrication (at a Pipe Fabrication Shop) & Erection M-H's, includes testing. Assumes Pipe is 20' off grade:

Carbon Steel A-53 Pipe Diameter	Schedule 40	Schedule 40	Schedule 40	Schedule 40
	Minimum M-H's per LF (Good Productivity)	Maximum M-H's per LF (with less than Average to Poor Productivity)	Minimum M-H's per M (Good Productivity)	Maximum M-H's per M (with less than Average to Poor Productivity)
2	0.88	1.98	2.89	6.51
4	1.54	3.47	5.06	11.39
6	1.87	4.20	6.12	13.78
8	2.44	5.49	8.00	18.01
10	2.57	5.79	8.44	18.99
12	2.70	6.09	8.87	19.96
14	3.19	7.17	10.45	23.51
16	3.48	7.82	11.40	25.66
18	3.72	8.37	12.20	27.45
20	4.12	9.28	13.52	30.43
22	4.29	9.64	14.05	31.62
24	4.45	10.01	14.59	32.82

Add 7.5% to above for height 25' to 50' • Add 12.5% to above for height 50' to 100'

If you have any questions or comments on this benchmark report please contact::

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