Determining how much Hardfacing is required.

www.hardfacetechnologies.com www.hardfacetechnologies.com/postle_hft_btsp/pdfs/amount-of-hardfacing-required.pdf

cylindrical. In arriving at the final weight of weld deposit make sure you consider the deposit efficiency of the welding process.

Stick Electrode - 65% • Tubular Electrode 90% • Bare TIG - 98%

Metal Core Wire - 95% • Flux-Cored Wire - 90%

Squares and Rectangles: Length x Width x Depth x (0.3) = Weight of Weld Deposit

Table 1 - Weight of Weld deposit - Flat Work - To estimate total weight of deposit, multiply weight per square inch by the number of square inches to be overlayed.

Thickness of Deposit	1/8	1/4	3/8	1/2	3/4
Pounds per Square Inch	0.038	0.075	0.113	0.15	0.225

Example: Welded areas - 12 inch x 2 inch at 1/4 weld thickness with a Tubular Electrode

(12 x 2 x 1/4 x 0.3) = 1.8 divided by 90% (welding process deposit efficiency) = 2 pounds of welding alloy

Cylinders: 3.1416 x Diameter x Depth x (0.3) = Weight of Weld Deposit

Table 2 - Weight of Weld Deposit - Cylindrical Components - To estimate total weight of deposit, multiply weight found below by the length (in inches) of the work to be overlayed.

Diameter of Work (Inches)	Weight (pounds per inch of length)			Thickness of Deposit (inch)		
	1/8	1/4	3/8	1/2	5/8	3/4
4	0.47	0.94	1.41	1.88	2.36	2.83
5	0.59	1.18	1.77	2.36	2.95	3.53
6	0.71	1.41	2.12	2.83	3.53	4.24
7	0.82	1.65	2.47	3.30	4.12	4.95
8	0.94	1.88	2.83	3.77	4.71	5.65
9	1.06	2.12	3.18	4.24	5.30	6.36
10	1.18	2.36	3.53	4.71	5.89	7.07
11	1.30	2.59	3.89	5.18	6.48	7.78
12	1.41	2.83	4.24	5.65	7.07	8.48
14	1.65	3.30	4.95	6.60	8.25	9.90
16	1.88	3.77	5.65	7.54	9.42	11.31
18	2.12	4.24	6.36	8.48	10.60	12.72
20	2.36	4.71	7.07	9.42	11.78	14.14
24	2.83	5.65	8.48	11.31	14.14	16.96
28	3.30	6.60	9.90	13.19	16.49	19.79
32	3.77	7.54	11.31	15.08	18.85	22.62
36	4.24	8.48	12.72	16.96	21.21	25.45
40	4.71	9.42	14.14	18.85	23.56	28.27
48	5.65	11.31	16.96	22.62	28.27	33.93
60	7.07	14.14	21.21	28.27	35.34	42.41

Example: Welded area - A 10 inch diameter cylinder, 12 inches long at a 1/4 inch weld thickness with a Tubular Electrode. 2.36 x 12 inches divided by 90% (welding process deposit efficiency) = 31.46 pounds of welding alloy.

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