(cylinder capacity) by 7 (one-seventh of the cylinder capacity). As a safety precaution, it is recommended that flashback arrestors be installed between the regulators and the gas supply hoses of all welding outfits. *Figure 5-21* shows recommended tip sizes of different manufacturers, for welding various thickness of metals.

Adjusting the Regulator Working Pressure

The working pressure should be set according to the manufacturer's recommendation for the tip size that is being used to weld or cut. This is a recommended method that works for most welding and cutting operations.

In a well ventilated area, open the acetylene valve on the torch and turn the adjusting screw on the acetylene pressure regulator clockwise until the desired pressure is set. Close the acetylene valve on the torch. Then, set the oxygen pressure in the same manner by opening the oxygen valve on the torch and turning the adjusting screw clockwise on the oxygen regulator until desired pressure is set. Then, close the oxygen valve on the torch handle. With the working pressures set, the welding or cutting operation can be initiated.

Welding Tip Size Conversion Chart

Wire Drill	Decimal Inch	Metric Equiv. (mm)	Smiths™ AW1A	Henrob/ Dillion	Harris 15	Victor J Series	Meco N Midget™	Aluminum Thickness (in)	Steel Thickness (in)
97	0.0059	0.150						Foil	Foil
85	0.0110	0.279							
80	0.0135	0.343		#00			#00		
76	0.0200	0.508	AW200				#0		
75	0.0220	0.559		#0	#0	#000			.015
74	0.0225	0.572	AW20					.025	
73	0.0240	0.610					0.5		
72	0.0250	0.635		0.5					
71	0.0260	0.660	AW201		1				
70	0.0280	0.711				#00	1		.032
69	0.0292	0.742	AW202						
67	0.0320	0.813	AW203				1.5	.040	
66	0.0340	0.864		1					
65	0.0350	0.889			2	#0	2	.050	.046
63	0.0370	0.940	AW204				2.5		
60	0.0400	1.016				1			
59	0.0410	1.041		1.5					
58	0.0420	1.067			3		3		.062
57	0.0430	1.092	AW205						
56	0.0465	1.181	AW206			2	4	.063	
55	0.0520	1.321		2	4				.093
54	0.0550	1.397	AW207				4.5		
53	0.0595	1.511			5	3			.125
52	0.0635	1.613	AW208				5	.100	
51	0.0670	1.702			6				.187
49	0.0730	1.854	AW209	2.5		4	5.5		
48	0.0760	1.930			7			.188	.250
47	0.0780	1.981					6		
45	0.0820	2.083			8				.312
44	0.0860	2.184	AW210				6.5	.25	
43	0.0890	2.261			9	5	7		.375
42	0.0930	2.362		3					
40	0.0980	2.489			10				
36	0.1060	2.692				6			
35	0.1100	2.794			13				

Figure 5-21. *Chart of recommended tip sizes for welding various thicknesses of metal.*