Appendix 31-A
Filter Lens Shade Specifications

Welding Operation	Suggested Shade Number
Shielded metal-arc welding, up to 5/32 in. (4 mm) electrodes	10
Shielded metal arc welding, 3/16 to 1/4 in. (4.8 to 6.4 mm) electrodes	12
Shielded metal-arc welding, over 1/4 in. (6.4 mm) electrodes	14
Gas metal-arc welding (nonferrous)	11
Gas metal-arc welding (ferrous)	12
Gas tungsten-arc welding	12
Atomic hydrogen welding	12
Carbon arc welding	14
Torch soldering	2
Torch brazing	3 or 4
Light cutting, up to 1 in. (25 mm)	3 or 4
Medium cutting, 1 to 6 in. (25 to 150 mm)	4 or 5
Heavy cutting, over 6 in. (150 mm)	5 or 6
Gas welding (tight) up to 1/8 in. (3.2 mm)	4 or 5
Gas welding (medium) 1/8 to 1/2 in. (3.2 to 12.7 mm)	5 or 6
Gas welding (heavy) over 1/2 in. (12.7 mm)	6 or 8

The choice of a filter shade may be made on the basis of visual acuity and may therefore vary widely from one individual to another, particularly under different current densities, materials, and welding processes. However, the degree of protection from radiant energy afforded by the filter plate or lens chosen to allow visual acuity shall still remain in excess of the needs of eye filter protection. Filter plate shades as low as shade 8, have proven suitably radiation-absorbent for protection from the arc welding processes.

NOTE: In gas welding where the torch produces a high yellow light, it is desirable to raise a filter lens that absorbs the yellow or sodium line in the visible light of the operation (spectrum).