



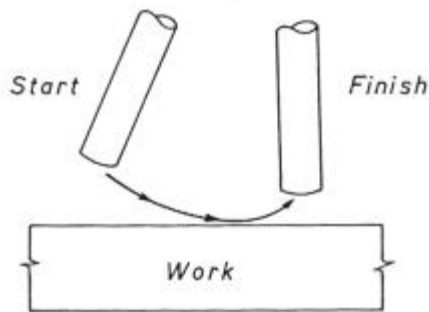
How to Strike and Establish an Arc

A welding arc is maintained when the welding current is forced across a gap between the electrode tip and the base metal. A welder must be able to strike and establish the correct arc easily and quickly.

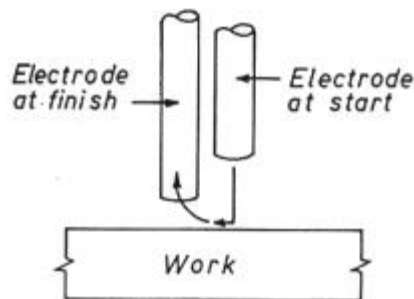
There are two general methods of striking the arc:

1. Scratching
2. Tapping

The scratching method is easier for beginners and when using an AC machine. The electrode is moved across the plate inclined at an angle, as you would strike a match. As the electrode scratches the plate an arc is struck. When the arc has formed, withdraw the electrode momentarily to form an excessively long arc, then return to normal arc length (see figure 1).



In the tapping method, the electrode is moved downward to the base metal in a vertical direction. As soon as it touches the metal it is withdrawn momentarily to form an excessively long arc, then returned to normal arc length (see figure 2).



The principal difficulty encountered in striking the arc is "freezing," or when the electrode sticks or fuses to the work. This is caused by the current melting the electrode tip and sticking it to the cold base metal before it is withdrawn from contact. The extra high current drawn by the "short circuit" will soon overheat an electrode and melt it or the flux, unless the circuit is broken. Giving the electrode holder a quick snap backward from the direction of travel will generally free the electrode. If it does not, it will be necessary to open the circuit by releasing the electrode from the holder.

Warning: Never remove your face shield from your face if the electrode is frozen. Free the electrode with the shield in front of your eyes, as it will "flash" when it comes loose.

Tip: Brush your work free of dirt and scale before you strike an arc.