

Arc Welding: Harnessing the Power of Electricity

Amazing results from such a simple method. Conjoining two pieces of metal with tremendous strength and making this possible by harnessing the power of electricity. An electricity arc of an arc welder is so hot that it melts metal into a liquid form instantly. Harnessing the power of electricity is what made America what it is today.

The basic operation of an arc welding unit, also known as a stick welder, involves electricity directed through a steel rod, known as an electrode, through the material that is being welded. To ensure a clean weld the electrode is coated in a material called flux which keeps contaminants from penetrating the electricity arc or the metal. Contaminants come from working with wet, dirty, or rusted metal or even the atmosphere contaminants such as oxygen or carbon dioxide. The only expenses on an arc welder is the electricity and the desired electrodes depending on the task at hand.

Depending on the unit's size an arc welder can cost anywhere from two hundred to five hundred dollars per unit. Arc welders are known for being able to weld very thick metals. To get a mig welder that welds the same thickness of metal as an arc welder a person would have to buy one of the more expensive higher class mig welders ranging all the way up to two thousand dollars. This cost seems high but is reasonable because then a person would have the same penetration of an arc welder but with a much cleaner weld than an arc welder.

Arc welding is great for welding in the outdoors or on dirty and rusted metal. Arc welding is more forgiving if the conditions of the outdoors were to be windy, raining, or snowing. Or if the condition of the metal may be dirty or rusted. As the electricity arc melts the metal electrode, the flux on the steel rod turns into a gas and surrounds the arc from contaminants entering even including oxygen. Although to ensure a good weld one must clean and dry metal to be worked on and have a proper welding environment to work in for best results.

Understanding how an arc welder works is only a small portion to welding. It is the person who understands how to harness the power of electricity who will get great returns on what they create.

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