



MMA WELDING

MMA (Manual Metal Arc) welding or SMAW (Shielded Metal Arc Welding) or sometimes known as Stick welding is a manual arc welding process that is the oldest and most versatile of the arc welding processes.

The process uses a consumable electrode coated in a flux to produce the weld. A DC or AC electric current from a welding power source is used to form an arc between the electrode and the work piece. As the weld is deposited the flux coating on the electrode disintegrates producing vapours that serve as a shielding gas and producing a layer of molten slag that floats to the top of the weld puddle where it protects the weld metal from the atmosphere during solidification. The slag is removed after depositing each weld run.

There are hundreds of different varieties of electrodes to use with this process, often containing alloys to add durability, strength and ductility to the weld and because of its versatility and easy to use equipment. It is a commonly used welding process in the construction industry, shipbuilding and general fabrication industries on steel structures and other industrial fabrications mainly welding iron and steel including stainless steel although it is sometime used to weld aluminium, nickel and copper alloys.

Despite being a relatively slow welding process, due to electrode changes and slag removal, it is still one of the most flexible techniques and has also advantages in restricted access areas. ■