

ABSTRACT

The aim of the project is to design a resistance seam welding machine; resistance seam welding is a process that produces a weld at the faying surfaces of two similar metals. The seam may be a butt joint or an overlap joint and is usually an automated process. It differs from butt welding in that butt welding typically welds the entire joint at once and weld progressively, starting at one end. Like spot welding, seam welding relies on two electrodes, usually made from copper, to apply pressure and current. The electrodes are disc shaped and rotate as the material passes between them. This allows the electrodes to stay in constant contact with the material to make long continuous welds. The electrodes may also move or assist the movement of the material. A transformer supplies energy to the weld joint in the form of low voltage, high current AC power. The joint of the work piece has high electrical resistance relative to the rest of the circuit and is heated to its melting point by the current.

Key Words: seam welding, fixtures, clamp, work piece, etc.

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