Weld bonding of stainless steel

There are three basic methods generally used when we want to joining stainless steel

Fusion Welding

In fusion Welding, heat is provided by an electric arc struck between an electrode and the metal to be welded

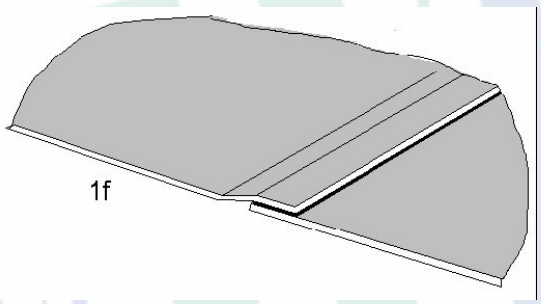
Resistance Welding

In resistance welding, bonding is the result of heat and pressure. Heat is produced by the resistance to the flow of electric current through the parts to be welded, and pressure is applied by the electrode

Adhesive join

This method consist in an adhesive film strip applied between the both faying surfaces as we want to join. The adhesive characteristics vary with plane characteristics.

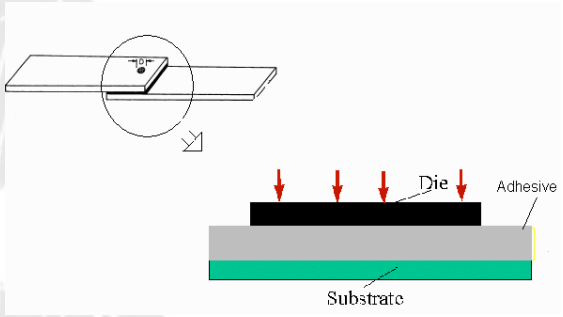
Weldbonding is a combination of the conventional resistance spot welding and adhesive bonding



Picture1: Weldbonding of two planes of stainless steel

Weld bonding has gathered wide acceptance as an effective joining process for significant improvement in static, dynamic and impact toughness properties of sheet metal joints. It also improves the corrosion and noise resistance as well as stiffness of the joint, over those observed in case of conventional resistance spot weld

Besides its wide spread service trials in various applications of aero-space and rail car industries, the use of weldbonding has also been successfully considered in fabrication of different components of automobile vehicles where a corrosive environment often prevails in service under dynamic loading



Picture2: Weldbonding

The properties of weldbond is largely dependent upon the characteristics of adhesive, surface preparation of the substrate prior to application of adhesive, thickness of adhesive layer, curing of adhesive(at 120ºC for 6om), and microstructure of weld joint at various resistance spot welding .