

Similar and dis-similar metal Welding / Forming

Dissimilar welding refers to the process of connecting material with different alloys through welding. The filler material and both metals need to be evaluating before choosing the best way to connect the metals. While fusion welding is a popular method, it does not work well for some combinations of metal. Solid state welding is very promising method for dissimilar metal joining. In solid state welding two work pieces are joined under pressure providing an intimate contact between them and at a temperature essentially below the melting point of the parent material. Bonding is a result of diffusion of the interface atoms. Ultrasonic welding, friction welding, forged welding, hot press welding, explosive welding, magnetic pulse welding all fall under solid state welding. Magnetic pulse welding is highly suitable for cylindrical and flat thin metallic sheet welding. The joint obtained is stronger than the weakest parent metal, no heat affected zone. In APPD joining of dis-similar metal combination like: D9 steel- SS316LN, ODS steel to P91, Al-Cu, Al-SS, Cu-SS, P91-SS304 have been established in specific geometry

