

ALUMINUM WELDING OF AIRCRAFT ENGINE COMPONENTS

ABSTRACT

A porosity free weld is formed at the surface of an aluminum object. The object is enclosed in a welding box that is sealed and purged with an inert gas, and preheated to at least 100 °C. Welding of one pass of the weld using a gas-tungsten arc welding method with AC current and shielding gas mixture of argon and helium is followed by removal of the top portion of the bead. The process of preheating, formation of a weld bead and top portion removal are repeated to achieve the desired weld thickness or build-up.

Figure 2