

عنوان مقاله:

Mechanism of Porosity Formation in Ti6Al4V Alloy Weldment

محل انتشار:

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خلاصه مقاله:

In the present investigation, mechanism of porosity formation in Ti6Al4V alloy weldment has been studied. Welding procedure performed by using of microplasma arc welding (MPAW) process at different current and welding speed. Metallographic characterization was carried out by light microscopy and scanning electron microscopy (SEM). Metallographic characterization has shown that porosity occurs in FZ. This could be due to mechanism of the hydrogen rejection that already present in the starting base metal. Pore nucleation can be homogenous or heterogenous. Calculations have shown that homogenous nucleation is not feasible mechanism for hydrogen pore creation in this alloy.

کلمات کلیدی:

Ti6Al4V alloy - Fusion zone - Heat affected zone - Microplasma arc welding – Porosity

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