

عنوان مقاله:

the effects of bonding temperature on the microstructure and strength of 410ss/Cu diffusion -bonded joint

محل انتشار:

کنگره بین المللی جوش و روشهای اتصال (سال: 1388)

تعداد صفحات اصل مقاله: 7

نویسندگان:

h sabetghadam - university of tehran

a araee

e omrani - iranian welding reasearch and eng center IWREC tehran

g.r shirazi

خلاصه مقاله:

in this present study a grade of stainless steel 410 and copper plates were joined together through diffusion bonding process at temperature range of 800-950 c . These were performed through hot pressing the specimens under 12 Mpa pressure for 60 min under 10⁻⁴ torr vacuum the microstructure and phase constitution near the diffusion bonding interface of SS/Cu were studied using optical microscope OM scanning electron microscope SEM ,X-ray diffraction XRD and elemental analyses through energy dispersive spectrometry EDS the results show the oxide layer which . formed on copper surface was restricted the diffusion of atoms in interfaces during the vacuum diffusion bonding

کلمات کلیدی:

diffusion bonding ,martensitic stainless steel ,interface microstructure ,EPMA, shear strength

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