

## عنوان مقاله:

Experimental investigations of microstructure of Al ۱۱۰۰ alloys welded by friction stir welding process

## محل انتشار:

مجله بین المللی طراحی پیشرفته و تکنولوژی ساخت, دوره 8, شماره 3 (سال: 1394)

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## خلاصه مقاله:

In this paper, hardness and tensile properties of welded zone of aluminum ۱۱۰۰ alloys by friction stir welding process was investigated and the effects of rotational and traverse speeds of tool on these parameters was studied. Also the fracture cross-section of welded samples was investigated. According the results of this paper, the hardness of weld material is higher than base material and is increased by decreasing the rate of rotational speed to traverse speed. The yields strength of weld material is ۷۰% of base material in best conditions due to the weak thermo mechanically affected zone around weld nugget, although in some samples the tensile strength of weld material is equal to base material. Also the SEM images of fracture cross-section of welded samples showed a ductile fracture during tensile test.

## کلمات کلیدی:

لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/1198192>

