

## عنوان مقاله:

Fabrication of Aluminum Based Surface Composites using Hot Rolling Method

## محل انتشار:

پنجمین کنفرانس بین المللی کامپوزیت (سال: 1395)

تعداد صفحات اصل مقاله: 2

## نویسندگان:

M.R FAZELI - M.Sc. student, Department of Mechanical Engineering, Iran University of Science and Technology, Narmak, ۱۶۸۴۶۱۳۱۱۴, Tehran, Iran

A.H Jabbari - PHD.STUDENT, Department of Mechanical Engineering, Iran University of Science & Technology, Narmak, ۱۶۸۴۶۱۳۱۱۴, Tehran, Iran

M Sedighi - Professor Department of Mechanical Engineering, Iran University of Science & Technology, Narmak, ۱۶۸۴۶۱۳۱۱۴, Tehran, Iran

## خلاصه مقاله:

Surface composites have some advantages such as increasing hardness and improving corrosion and wear resistance of components surfaces. In this paper, surface aluminum matrix composite has been fabricated using powder metallurgy and hot rolling method. First, pure aluminum and Alumina ( $Al_2O_3$ ) powders were mixed together with 5wt% and 10wt% of reinforcement. Then, the mixture was cold-compacted on the surface of aluminum plates by applying a rubber pad. Next, the products were sintered in a vacuum furnace. Finally, the specimens were hot rolled at 500 °C in order to increase mechanical properties. The results of microscopy examination show that there are a proper conjunction between aluminum plate and surface composite. Moreover, the Micro-hardness of surface composite has been improved in comparison to aluminum plate

## کلمات کلیدی:

Aluminum matrix composite,  $Al_2O_3$  particle, Surface composite, Powder metallurgy, Warm rolling

## لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/778960>

