

## عنوان مقاله:

ON THE ROLE OF TOOL, PN DIMENSON ON MICROSTRUCTURE AND HARDNESS OF MAGNESIUM BASED AZ91/SIONANO COMPOSITE FABRICATED BY FSP

## محل انتشار:

سومین کنفرانس بین المللی مواد فوق ریزدانه و نانوساختار (سال: 1390)

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## خلاصه مقاله:

In this investigation, the role of tool pin length in different rotational speeds on the microstructure and hardness of the stirred zone was investigated. Two hot working tools with pin length of 4 and 4.5 mm and rotational speeds of 1000 and 1250 rpm and traverse speed of 40mm/min were used to produce AZ91/SiO<sub>2</sub> Nano composite containing 8% volume fraction Silica powder. Size of the reinforcement particles was 10 Nano meter. Results of microstructure and hardness analysis of the specimens show that by increasing the length of the pin, density of powder particles rises in the Zones near the surface. Also an increase in the tool pin length leads to a rise in mean hardness in the stir Zone. In this research, the maximum degree of the hardness achieved was 120 HV and the smallest grain size was about 10 .microns

## کلمات کلیدی:

Friction stir Processing, Hardness; Nano Composite; Tool pin

## لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/613129>

