

## عنوان مقاله:

The Effect of Repetitive Corrugation and Straightening by Rolling (RCSR) Process on the Microstructure of 304 stainless steel

## محل انتشار:

دهمین همایش مشترک و پنجمین کنفرانس بین المللی انجمن مهندسی مواد و متالورژی و انجمن علمی ریخته گری ایران (سال: 1395)

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## خلاصه مقاله:

The current research is an attempt to study the effect of a novel severe plastic deformation technique called repetitive corrugation and straightening by rolling (RCSR) and subsequent annealing on the microstructure and mechanical properties of AISI type 304 austenitic stainless steel. In this study, RCSR process was carried out at 200 °C in order to avoid the formation of martensite phase when a high density of dislocations was introduced into the austenite phase. Thereafter, annealing treatment was applied to refine the microstructure of 304 stainless steel. The specimens were examined by optical microscopy (OM), tensile and micro-hardness tests. The results indicate that by increasing the cycles of RCSR process, more mechanical twins are induced, the hardness and in particular, the yield stress of specimens have been increased.

## کلمات کلیدی:

stainless steel, severe plastic deformation, RCSR 304

## لینک ثابت مقاله در پایگاه سیویلیکا:

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