

## عنوان مقاله:

Investigation and Comparison of Microstructure and Mechanical Properties Between Parts of Shear Spinning and Rolled

## محل انتشار:

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## خلاصه مقاله:

In this study, the shear spinning process and the rolling process on C11000 copper metal with a thickness reduction of 50% at room temperature were performed and investigated. In the shear spinning specimen, the grains are stretched in the axis direction and elongated in the circumferential direction. In the rolled specimen, the grains are extended in the direction of rolling, and the elongation of the grains in the T-N plane is less than in the shear spinning specimen. EBSD analysis showed that the ratio of high angle boundaries to low angle boundaries in the shear spinning specimen is higher than the rolled specimen. The mechanical properties of the rolled and shear spinning specimens were investigated in three directions of zero, 45, and 90 degrees relative to the forming direction, which showed that the strength in all three directions was higher in the rolled specimen than in the shear spinning specimen. The elongation in the shear spinning specimen is more than in the rolled specimen. The highest amount of tensile strength in the rolled specimen is about 370 MPa, and the highest elongation is about 12% in the shear spinning specimen. Also, anisotropy in shear spinning specimens was less than rolled specimens.

## کلمات کلیدی:

Spinning, Shear Spinning, Rolling, Mechanical Properties, Copper

## لینک ثابت مقاله در پایگاه سیویلیکا:

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