عنوان مقاله:

MICROSTRUCTURE HOMOGENETY AND GRAN STZE DSTRIBUTION OF PURE COPPER PROCESSED BY ACCUMULATIVE BACK EXTRUSION METHOD

محل انتشار:

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خلاصه مقاله:

The present work deals with the microstructure evolution of pure copper through a new noble severe plastic deformation method. A set of pure copper (99.99%) work-pieces with coarse grained microstructure was processed by accumulative back extrusion (ABE) method at room temperature. The optical and scanning electron microscopy (SEM) and hardness measurements were utilized to study the microstructure evolution and also grain size and hardness homogeneity within the microstructure. The results indicate that ABE is a capable process to provide grain refined microstructures with enhanced mechanical properties. The observed grain refinement has been ascribed to the occurrence of dynamic restoration processes. The analysis of microstructure homogeneity and grain size .distribution shows a better homogeneity as the ABE passes are increased

کلمات کلیدی:

Pure copper; severe plastic deformation; Accumulative back extrusion; Inhomogeneity