عنوان مقاله:
Investigation of floating die as a promising method in comparison to single action die to produce dense compacts with high aspect ratio

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خلاصه مقاله:
In this study the commercially pure Aluminum powder was compacted by single action and floating dies at room temperature. The effect of compaction method on densification was studied using density distribution, micro-hardness measurements and scanning electron microscope (SEM) along compaction axis of processed samples. The density measurements of compacted samples through floating die process show more uniform density distribution in comparison to single action process, which is in good agreement with micro-hardness and SEM results. Results also show that the densification requires lower compaction load in floating die process than it in single action compaction process, which is due to the improvement of frictional condition by change in relative movement in the frictional surfaces of floating die process. Therefore it makes floating die more beneficial in producing dense compacts with high aspect ratio (ratio of height to diameter) which is not possible in single action die compaction process.

کلمات کلیدی:
Aluminum powder, Single-action compaction, Floating die compaction, density distribution, Microhardness

لینک نتیجه بین مقاله در سیویلیکا:
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