SINTERED COPPER-GRAPHITE POWDER COMPACTS FOR INDUSTRIAL APPLICATIONS

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Abstract

Studies were made on copper-graphite based powders and sintered compacts for industrial applications. The dependence of particle shape on friction in the powder mass, compression ratio and electrical receptivity of powder metallurgy components was studied using near irregular and angular copper powders generated by precipitation. Results reveal that powders with particles that are nearly irregular in shape have lower friction, lower compression ratios and higher electrical resistivities in sintered compacts than powders with angular particles. Also, the effects produced by the small additions of lead and zinc on the electrical resistivity and hardness of sintered copper-graphite compacts are also presented, and the influence of variation of compacting pressure is discussed.

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