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高铝锌基合金粉末冶金材料及其摩擦学特性初探

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摘 要： 初步研究了高铝锌基合金的粉末冶金工艺及其材料的摩擦磨损性能。通过气喷气冷法制取合金粉末，用压制后真空烧结的方法制备高铝锌基合金粉末冶金材料。实验结果表明，高铝锌基合金的粉末冶金试样在干摩擦和油润滑条件下的磨损率及摩擦系数均小于同一合金的铸造试样，但其压溃强度有待提高。在实验的基础上还探讨了该材料的耐磨减摩机理。

关键字： 高铝锌基合金 粉末冶金 摩擦 磨损

P/M HIGH ALUMINIUM-ZINC ALLOY MATERIAL AND ITS TRIBOLOGICAL CHARACTERISTICS

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Abstract: The powder metallurgy of high aluminium-zinc alloy and its tribological characteristics have been studied. The alloy powder was produced by gas atomization. P/M material samples were made by pressing and sequent vacuum sintering. The results show that the wear rate and friction coefficient of P/M material samples are lower than the cast alloy samples of the same composition, but their compressing strength needs to be improved. Based on the experimental results, the wear-resisting and anti-friction mechanism of the P/M materials have also been probed.

Key words: high aluminium zinc alloy powder metallurgy friction wear

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