Impact 구동 방식 압전 엑츄에이터의 마찰재 특성

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삼성전기

Properties of friction material for impact driven piezoelectric actuator

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Abstract : Friction material in a piezoelectric system is a important part to affect to moving performance. In this paper, alumina ceramics (AlO_2), silicon carbide (SiC), high speed steel and super-hard alloy (WC, Tungsten Carbide) having a hardness knoop of 1000 to 2000 kg/mm^2 were tested as a friction material of AF module. Even though AlO_2, SiC and high speed steel were a high-hardness material, AlO_2 and SiC were worn by a rough surface, and SiC is rusted in humidity condition. AF module using super-hard alloy has showed a stable moving performance in life time test.

Key Words : Friction, AlO_2, SiC, high speed steel, WC