

멀티 싸이클론 진공 청소기의 소음 저감에 관한 연구

The Study on the Noise Reduction for Multi-Cyclone Vacuum Cleaner

황근배[†](LG전자) · 김영중 · 정창욱 · 장종규
Geunbae Hwang, Youngjong Kim, Chungook Chong and Jongkyu Jang

Key Words : Cyclone, Vacuum Cleaner, Flow Induced Noise, Air-borne Noise

Abstract : The major sources of bag-less vacuum cleaner noise are generated from its flow path and an electric motor. The flow path starts from its cleaning surface thus collects mixture of air/dust and carries it to the cyclone type separation chamber, commonly known as a dust bin. The cyclone separator creates spiral downward or upward flow in the axial direction to separate dust from air and during this operation unpleasant tonal noise are generated. This paper presents both experimental and analytic process of sound sources identification and its noise reduction effect of stabilizers in a Multi-cyclone system of canister vacuum cleaner.