

경전동 수공구 사용시 작업조건에 따른 손 부위의 압력분포 평가
(Evaluation of Pressure distribution on the Hand While Operating
Light-weighted Powered Hand Tools)

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ABSTRACT

The objective of this study was to evaluate the externally surface pressure on the hand while operating light-weighted powered hand tools. The pressure on the hand was measured at 16 points using PMS(pressure measurement system). The following parameters were changed and compared : tool types, feed forces, working directions, and type of wearing gloves. Drilling task was performed on a marble plate that has shore hardness of 88.4 using AEG power drill. And grinding task was performed on a metal plate that has shore harness 25.5 using BOSCH power grinder. Each object was horizontally and vertically mounted in the experiment. A statistical analysis was performed with SAS 8.0. The results showed that the pressure level of distal part of the finger was higher than others. The pressure on distal part of the web between the index finger and the thumb linearly increased with increasing feed forces.

Keywords : Pressure distribution, Powered hand tools, PMS, MSDs, HAVS