

## 이종접합을 위한 초음파 혼 설계 및 진동해석

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### Vibration Analysis and Design of Ultrasonic Horn to the Bonded Dissimilar Materials

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#### Abstracts

Ultrasonic fine welding, cutting, cleaning, inspection and measurement is widely used in various fields over 20kHz. However, for High Frequency of 60kHz or more study areas is still insufficient, and the result is lacking. Therefore, this study used ultrasonic horn to the Bonding of Dissimilar Materials for effective design. Finite element analysis (FEA) is using the equations of motion to establish the model. The optimal design for the basic interpretation of vibration characteristics of the ultrasonic measures horn will examine the design.

**Key Words** : Ultrasonic bonding(초음파접합), Resonance Frequency(공진주파수),  
Horn Design(혼설계), FEM(유한요소법), Modal Analysis(모드해석),  
Bonding of Dissimilar Materials(이종재료접합)