

동적특성을 고려한 진동시험치구의 진동해석 및 실험결과 분석

Investigation of Vibration Analysis and Test of Vibration Fixture Considering Dynamic Properties

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Table 1 Variable frequency test

| (Hz) | (mm) | 가 (g) |
|-------|---------------|-----------|
| 4~15 | 0.762 ± 0.152 | 0.05~0.69 |
| 16~25 | 0.508 ± 0.102 | 0.52~1.28 |
| 26~33 | 0.254 ± 0.051 | 0.69~1.11 |

1.

가

가

MIL-STD-167-1A

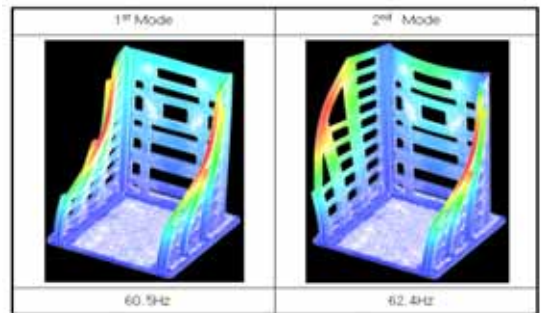


Figure 1 Results of 1st and 2nd Mode

가

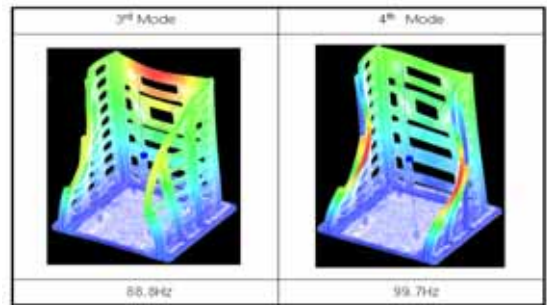


Figure 2 Results of 3rd and 4th Mode

가

(1)

2.

2.1

(1)

Fig.1

FE Model

가

(1) 가
(2)

$$F = F_0 \sin t \quad (1)$$

$$T = \frac{1}{1 - (\omega/\omega_n)^2} \quad (2)$$

2.0 가

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$$\omega_n \geq \sqrt{2} \omega$$

MIL-STD-167-1A Table 1

(2)
Fig.1 Fig.2

Normal Mode
47Hz 60.5Hz

(3)

1,2 Y 가 50Hz Y
3,4 X
91Hz X 가

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가 Fig.5 가

3.

2.0
47Hz (1)
50Hz 60Hz
MIL-STD-167-1A

가 MIL-STD-167-1A 가
가 4~33Hz

(3)
가
가
47Hz

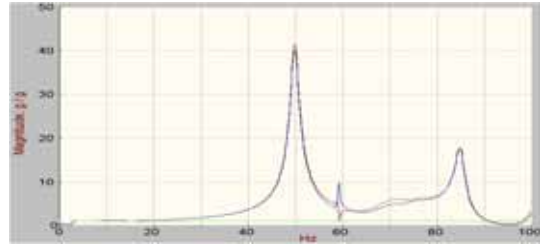


Figure 3 Y-axis test

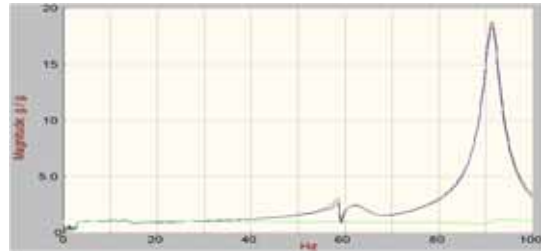


Figure 4 X-axis test

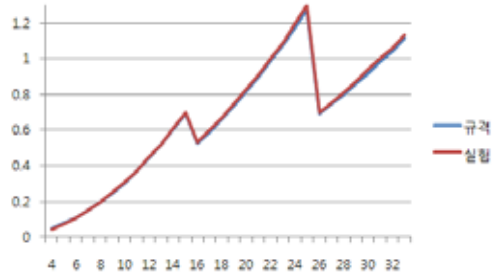


Figure 5 Comparison between specification and test result

가 100Hz

MIL-STD-810G

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