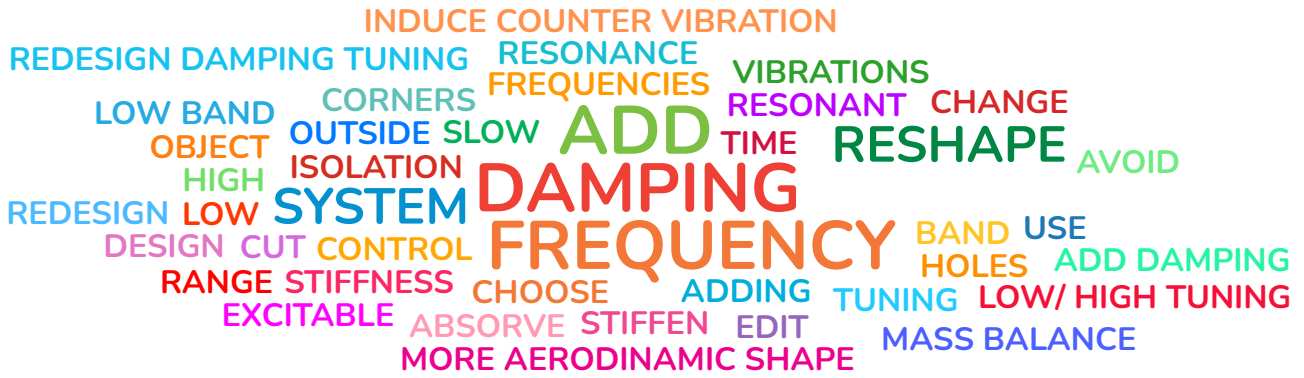


VIB: Design and Remedial Measures

Number of participants: 36

1. What are the different approaches presented in the video to reduce vibration levels in structures ?

0 correct answer
out of 14 respondents



Correct answers

high tuning

low tuning

reshaping

adding damping

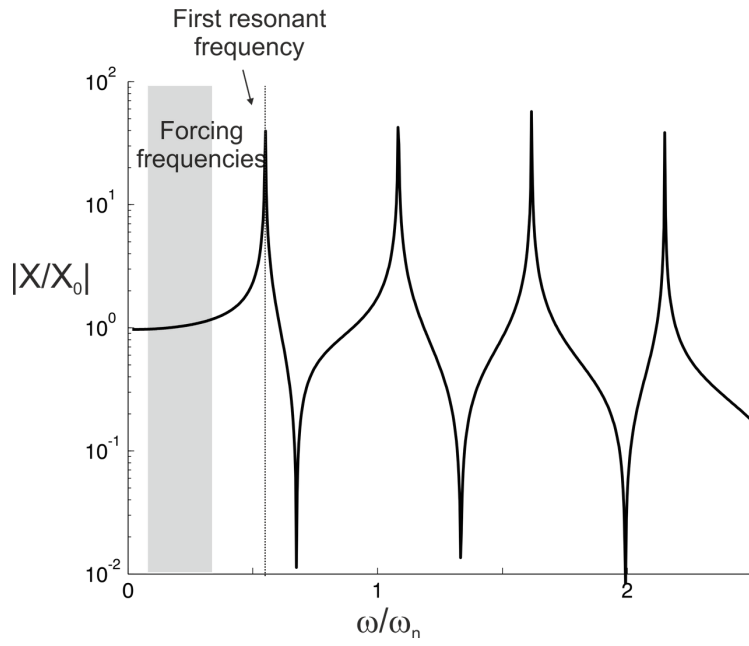
tuned vibration absorber

vibration isolation



2. The FRF represented in the figure corresponds to a structure which has been designed with

9 correct answers
out of 18 respondents



Low tuning



9 votes



High tuning



9 votes

added damping



0 votes

A tuned vibration absorber



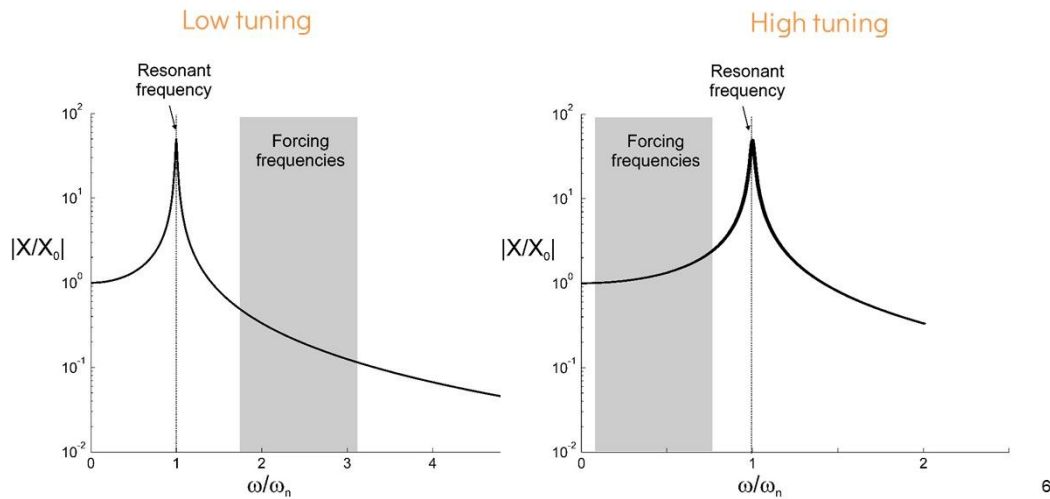
0 votes



3. From the point of view of performance, which of these two solutions (high and low tuning) is best, and why ?

0 correct answer
out of 15 respondents

High tuning vs low tuning



Low

Low tuning, less material/stiffness

High tuning. Resonant frequency is not reached

High tuning

Low tuning as it will have less energy of vibration

Low tuning because of lower frequencies

High tuning

Low

Low tuning. Less amplitude

Low tuning, the effect of the forces are lower

Low tuning: The amplitude of vibration is lower after resonance

Low tuning

Low tuning

Low tuning

Low tuning because the response is lower

Correct answer

With low tuning, X/X_0 is always smaller than 1, while for high tuning it is always higher, so the performance is better with low tuning.



4. If high or low-tuning cannot be achieved on a structure, what are the alternatives to lower the level of vibrations ?

0 correct answer
out of 16 respondents

Add damping

TMD

Tmd

Add damping

Tuned mass dampers

Add damping

Damper

Filters

Damping

Increase or decrease the natural frequency of the structure

TMD

TMD

Isolation

Add damping

TMD

dampers

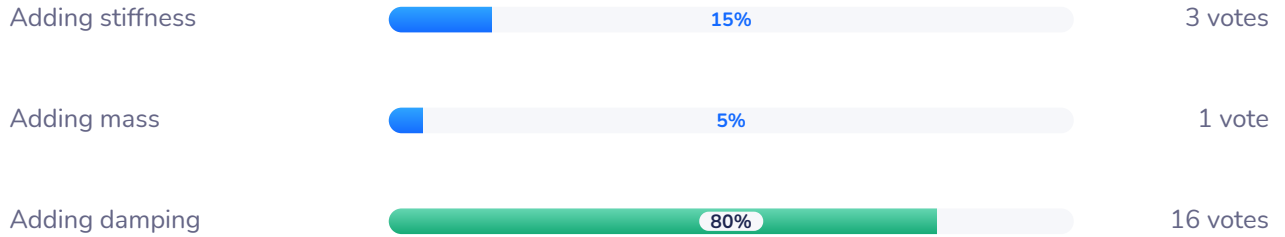
Correct answer

stiffening



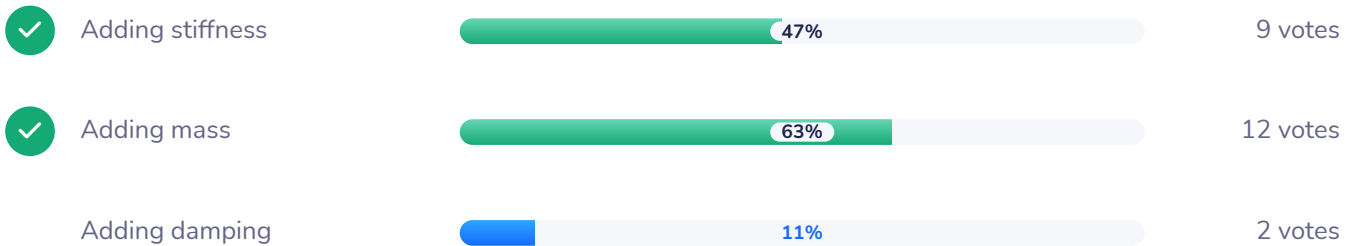
5. If the vibration problem is related to resonance, which of these is most efficient to reduce vibration levels ?

16 correct answers
out of 20 respondents



6. If the vibration problem is not related to resonance, which of these is most efficient to reduce vibration levels ?

3 correct answers
out of 19 respondents



7. If one wants to reduce the amount of dynamic excitation applied to a system, the possible solutions are

1 correct answer
out of 17 respondents

