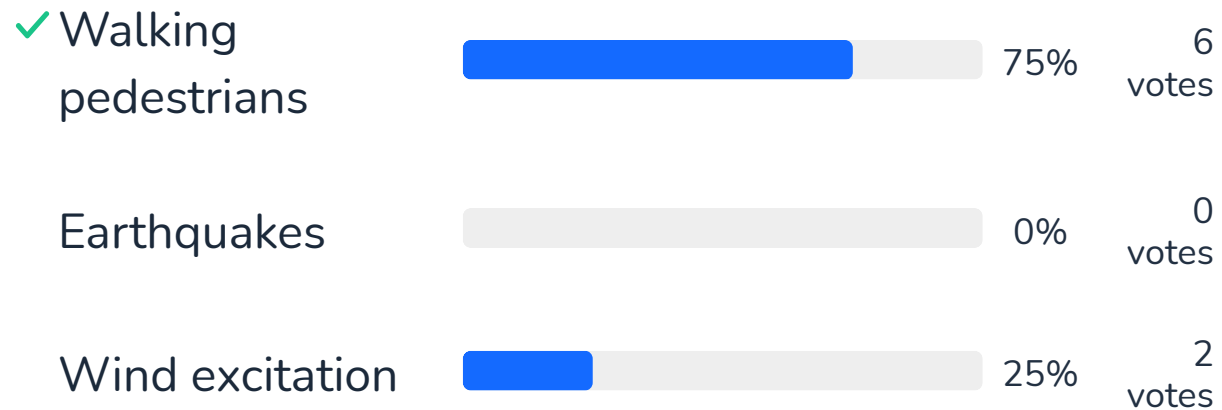


DOS2021 : Vibrations problems

Number of participants: 8

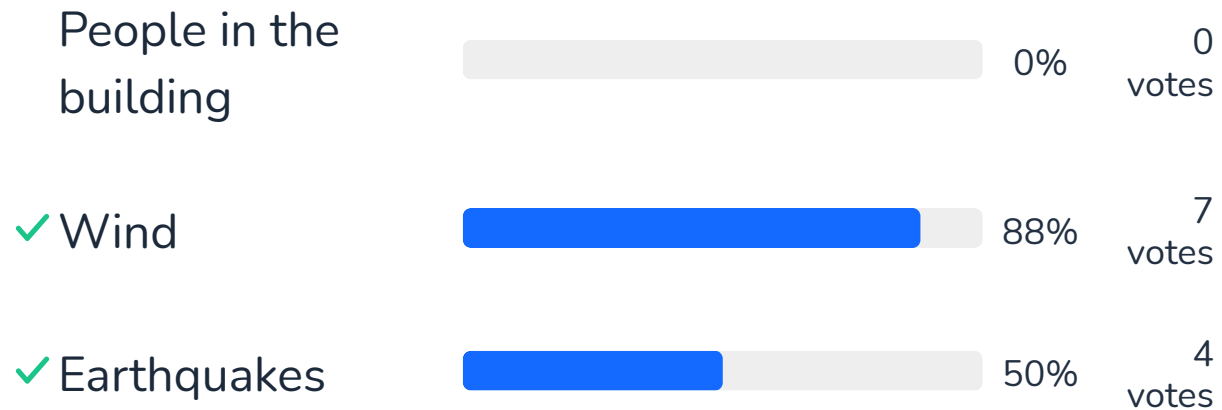
1

For pedestrian bridges,
excessive vibrations are
usually caused by



2

In high-rise buildings,
excessive vibrations are
usually caused by



3

Cite a few examples of machine induced vibrations

Pumps

Drill

Ventilator

Elevators

Washing machine, motor

Washing machin

Washing machine

Washing machine

Car engine

Washing machines

Engine

Washing machine

4

Cite a few examples of precision equipment which should be protected from vibrations

Barres de weber

Camera

Microscope

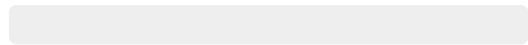
Satellite

Microscope

5

The most common problem with lighting poles and chimneys is

turbulent wind
excitation



0%

0
votes

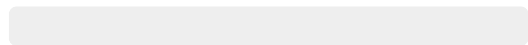
✓ vortex induced
vibrations



100%

7
votes

galloping
instabilities

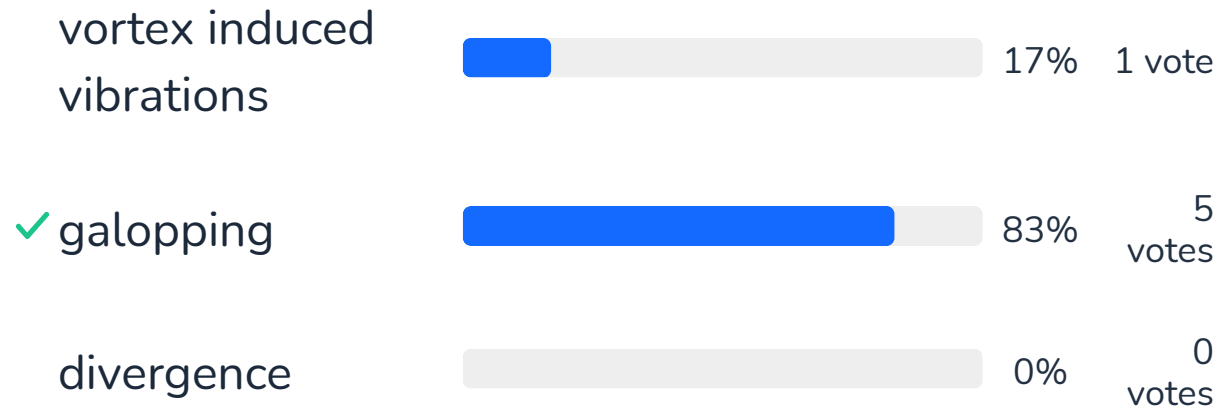


0%

0
votes

6

A common problem
encountered with power lines
is



7

What is the most dangerous problem related to vibrations for aircrafts ?

Exaction at own frequency by wind

Reach the eigenvalues frequency

Resonance

Single mode flutter

Galloping

8

What is the main difference between VIV and instabilities like galloping and flutter ?

Symmetrical objects or not

VIV create resonance problems (limited by damping) \neq galloping/flutter create zero damping \rightarrow infinite amplitude

Galloping and flutter are instabilities and VIV not, but it may cause resonance

Geometry of the body

